A Lecture
ON
RESPONSIBILITY AND DISEASE.

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GENTLEMEN,—I am to speak to you this afternoon about "Responsibility and Disease," and in adopting that very comprehensive title for my lecture I had in view the liberty which I should possess under it to draw my illustrations from any part of a wide field of research, while restricting my argument to but one section of it. For it is my purpose to discuss, not all the various ways in which deviations from health may affect a man in his ethical, social, statutory, or common law obligations, but only to ventilate once more in the ever clearing and freshening atmosphere of medical science the somewhat stale question as to the relation between mental distempers and legal obliquities. And even this question I shall not exhaustively examine; for I shall have nothing to say to-day as to the effects of mental derangements and failures on the validity of contracts and wills, but shall confine my attention to diseases of the brain and nervous system in connexion with amenability to punishment for breaches of the law, or, in other words, to insanity and crime. And in thus confining my attention to insanity and crime I do not for one moment suppose that I can in the hour at my disposal deal adequately with that, although circumscribed, still voluminous subject, about which so much has been written and said during the last forty years. Dr. Bucknill, our highest medical authority regarding it, tells us that he has been engaged in the discussion of it for the whole of that period, and that it has in recent years been under the special consideration of the Select Committee on the Homicide Bill and of the Royal Commission on the Criminal Code Bill, besides exercising the judgment and taxing the ingenuity of a number of eminent judges and a host of medical and legal writers. I cannot pretend to summarise for you what has been written or said about insanity and crime during the last forty years, or a fourth of that time; to present you with a complete digest of the law on the subject; to criticise the most remarkable cases which have brought the law prominently under popular and professional notice; or to trace out the historical growth of medical and legal opinion on the subject. All that I propose is to submit to you a few observations, I fear somewhat desultory, which have occurred to me on the following points: (1) on the insufficiency of the definition or test of insanity at present accepted and acted on in courts of law in this country, and on an amended test which would commend itself to medical experience; (2) on the value of expert testimony in establishing the existence and nature of insanity in courts of law; and (3) on a practical step towards the reconcilement of medical and legal differences of opinion on questions of insanity and crime.

But before entering on the consideration of these questions I may perhaps say a few words on the spirit and style in which it appears to me they should be discussed, and deprecate the warmth and bitterness which some medical men have imported into the controversies which have taken place regarding them. It cannot be denied that language of a very disrespectful and intemperate description has occasionally been applied by members of our profession to those who administer the law in connexion with their directions and decisions in cases in which a defence of insanity has been set up on behalf of persons accused of crime. Now, I am not going to say that such language has been altogether inexcusable. Indignation is not a wholly superfluous and vicious element thrown into the human constitution. Like the stings of insects and the spurs of birds, it has a useful function to perform, and we must not be surprised to see it stirred into activity in the presence of what is believed to be injustice. Lord Bramwell, one of our most distinguished judges, has told us, when discussing this very subject of insanity and crime, that hatred and detestation are naturally awakened in the mind by certain offences; and we can understand, therefore, why medical men should feel somewhat incensed when they see what they have persuaded themselves is a grievous disease punished as if it were a heinous crime. They are scarcely to be blamed for feeling angry under such circumstances; we all feel angry and experience a little involuntary clenching of the fist when we read of Squeers caning poor little Bolder because he had warts on his work-worn and attenuated fingers; but they are to be condemned because they put no measure to their anger, and hurl at individuals censures which ought properly to be directed against a system. To call our judges who have ever been conspicuous amongst men of their time for learning, independence, and humanity "judicial murderers," to describe them as "obstinate and prejudiced," meet objects of "contempt and disgust," is to betray the weakness of passion and to fall into gross error. For individual judges, it is to be borne in mind, do not make the law, but administer it, and have no option but to apply those principles which they find established, without reference to their own estimate of their goodness or badness. Some judges approve the principles of law which now regulate the courts in dealing with cases of insanity and crime, while others think them of questionable authority and unsatisfactory; but whether they accept them as sound or dissent from them as imperfect, they are equally bound to adhere to them until the law is altered, and can only modify the application of them within very narrow limits; and so long as they construe them in a reasonable manner, they should be exempt from charges of harshness and stupidity.

> "Till thou canst rail the seal from off my bond
> Thou but offend'st thy lungs to speak so loud."

And till medical psychologists can procure an Act of Parliament, or a judgment from the Court for Crown Cases Reserved modifying the law, they but squander their energy in slanging the judges. Nay, they do more than that, for they injure the cause they have at heart, postpone the reforms they advocate, and perhaps entail on themselves and the rest of their craft some unpleasantness when summoned to appear as witnesses in courts of law. It is certain that no change in the law will take place without the concurrence of the Bench, and the Bench is not likely to be propitiated and won over to a calm and favourable judgment on the modern discoveries of medical science by copious torrents of abuse from medical quarters. As Mr. Justice Stephen has pointed out, "it is hard for anyone not to resent attacks on a small body of which he is himself a member, such attacks being often harsh and rude, and almost always connected with, if not founded on, misconceptions." It may well be, therefore, that the judges—a small body—do to a certain degree resent the attacks made on some of their number by medical men, conclude that "sound and fury" in this case, as in so many others, signify nothing, and treat with some impatience medical men who appear before them as witnesses. Mr. Justice Stephen admits that medical men are sometimes treated by judges in a manner that cannot be defended. "Sarcasm and ridicule are out of place on the Bench," he observes, "in almost all conceivable cases, but particularly when they are directed against a gentleman and a man of science who, under circumstances which in themselves are trying to the coolest nerves, is attempting to state unfamiliar and in many cases unwelcome doctrines." True, medical men sometimes do themselves scant justice in courts of law, particularly in cases in which insanity is in question. With the tremor of the witness-box upon them, and the fear of metaphysics before their eyes, they commit themselves occasionally to extraordinary propositions. A medical man, who in private consultation has given a perfectly lucid and consistent account of a case, may so confuse and complicate his statement of it under cross examination as to create the impression that he is himself weakminded or is wilfully prevaricating. Apart, however, from the shortcomings of medical men as witnesses, it is indisputable that they do sometimes in courts bear the brunt of an *odium judicium*, engendered, not by the painful and, it must be admitted, discreditable conflicts of testimony which now and then arise between them, nor by the fact that a few of their number have from time to time heedlessly lent their support to a plea of insanity when it was only the law's "last shift" in an otherwise defenceless case, but by the bitter antagonism to the Bench openly exhibited

by some medical authors of ability and repute. Lord Bramwell says the lawyers smile at the abuse so lavishly bestowed on them by doctors in relation to questions of insanity and crime; but I agree with Mr. Justice Stephen that they more often frown at it, and from their "coign of vantage" on the Bench, themselves the *élite* of their profession, they can frown with withering effect on medical witnesses, who are not always picked men, and who almost invariably labour under some embarrassment. On all grounds therefore, alike with a view to comfort in court, to the retention of public confidence, and to the early recognition of the just claims of medical science, it is desirable that the relations of responsibility and disease should be debated by medical men with coolness and good temper; and I feel sure that the influence of the College of State Medicine will be used to ensure a truly scientific and statesman-like attitude in all who engage in such debate. A flash of wit, or even a merry jibe, now and again may not be altogether out of place in illuminating what must necessarily be a tedious discussion, but all unworthy aspersions thrown on men whose positions and services entitle them to public esteem should be studiously avoided.

From these preliminary remarks I turn now to inquire what is the law of England with reference to insanity as an excuse for crime, and how far is that law reasonable and in accord with the conclusions of medical science? As to what the law is there cannot be much doubt, for every judgment delivered in cases in which the plea of insanity has been set up since 1843 has been founded on the answers then returned by the judges to the questions put to them by the House of Lords during the ground-swell of the McNaghten case. The very words of these answers have been almost invariably used by judges charging juries in such cases, and they have been used, too, by judges in whose private opinions they do not, at least as ordinarily interpreted, admit of satisfactory application in many difficult cases. The answers of the judges are of considerable length, but the real gist of them for our purpose lies in a paragraph of the answer which was returned to Questions II. and III., taken conjointly, and which runs as follows: "That to establish a defence on the ground of insanity, it must be clearly proved that at the time of committing the act the accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or if he did know it that he did not know he was doing what was wrong." Now, it is obvious that under this ruling, if I may call it so, are included a large number of cases of insanity. Under it would stand excused the raving maniac who does not apprehend the nature or quality of any act, the idiot who is in the same predicament, the fatuous person who cannot foresee the consequences of his acts, and the victim of delusions, when these are of such a character as would justify homicide were they beliefs entertained by a sane man. But it is, and always has been, equally obvious to medical men that this ruling excludes a considerable proportion of cases of insanity in which moral as distinguished from legal irresponsibility exists, and that it is faulty in founding the test of insanity on knowledge or an intellectual state while it ignores states of the emotions and will, which are always more influential on conduct than intellectual states, and bulk far more largely in insanity. Attempts have been made to show that the statement of the law in the paragraph quoted was not meant to be exhaustive, but that it was so must, I think, be deduced from a study of authorities, and one of the highest of these, who has written quite lately on the subject, Lord Bramwell, has put the matter tersely thus: "The question therefore should be, not whether the person accused of a crime is mad, but whether he understood the law's threat." "Whom ought the law to punish?" Lord Bramwell asks. "All whom it threatens on conviction. Whom ought it to threaten on conviction? All who would be influenced by the threat; all whom it would or might deter or help to deter." The law as it stands is, according to him, "right to demonstration," and he would unhesitatingly punish, with enhanced severity if need be, all insane persons committing crime and capable of understanding the law's threat. The woman labouring under melancholia, believing herself doomed to die and killing her child at the command of a supernatural voice or in order that it may not be left friendless in this troublesome world, and the monomaniac who, imagining that he has been robbed of his reputation and assailed by electricity and mesmerism, kills one of his supposed persecutors, ought both, according to Lord Bramwell, to be executed.

It will be worth while to examine Lord Bramwell's position with some minuteness, for it lies at the very core of our subject, and in doing so I would, in the first place, submit to you that he assumes the very point at issue between doctors and lawyers when he takes for granted that in the morbid mind will-power is coextensive with knowledge. All who do not understand the law's threat he would exempt from punishment; all who do understand it he would punish, because in his view all who thus understand have the power of refraining from the act for which punishment is threatened. Now it will become apparent as we go on that this is not so, and that there are lunatics who are as powerless to refrain from acts which they well know will be followed by punishment as epileptics are to refrain from fits which they well know will place them in great jeopardy; but in the meantime I wish to make a more general observation, and say that Lord Bramwell's whole theory of punishment—which is, indeed, that of Bentham—is, it appears to me, too narrow. What is the true theory of punishment? Why do we inflict pains and penalties upon those who do wrong? Simply, he would reply, to deter others from falling into similar evil courses. The power of deterrence is, in his estimation, the sole motive underlying punishment. The reformation of the criminal he would, perhaps, regard as a secondary motive; but this, strictly considered, must be classed under deterrence, for to reform a criminal is simply to deter him by punishment from repeating his offences. But this deterrent theory of punishment has never satisfied mankind. Legitimately carried out, it would lead to punishments of impressive severity, perhaps to torture; or to the conclusion of the stoics as realised in the laws of Draco, which made death the punishment of every crime; or, on the other hand, to the abandonment of punishment altogether whenever it failed in arresting crime; or, still again, to the punishment of persons known to be innocent for the sake of example, when a great crime had been perpetrated, or when crime was prevalent. The fact is that it is impossible to eliminate from our penal institutions an element of moral reprobation. There is in us an organic cohesion between the idea of transgression and the idea of penalty, an intuitive belief in a *vis judicatrix naturæ*, which metes out punishment to law-breakers, redresses grievances, readjusts a balance that has been disturbed, and subsumes the criminal under that law of force which he has himself asserted. When a child burns its finger by placing it in the flame of a candle, the sharp pain experienced deters from a repetition of the experiment; but it would be a very special teleology that would maintain that the whole object of combustion was deterrence from burning, and so I think it is but a narrow philosophy that recognises in punishment nothing deeper and wider than a practical significance.

"There is a fundamental principle in human nature," as Lord Justice Fry has cogently argued, which recognises that there is "a fitness of suffering to sin; that the two things—injustice and pain—ought to go together, so that we naturally desire to bring about an association of the two where it does not already exist." "Punishment is, in short," says Lord Justice Fry, "an effort of man to find a more exact relation between sin and suffering than the world affords us. But we may go a step further, and say that to the mind of man this principle is true, not only absolutely, but also *secundum majus et minus*, and that we feel that great suffering is fitted to great sin, and small suffering to small sin. In fact, men have always, as soon as the idea of punishment arises at all, sought for some relation between the punishment and the particular offence; they have not been content to look merely to the effect of the punishment in preventing other like crimes, but they have had regard to the moral nature of the crime, and have tried to assign pain and suffering as nearly as possible in proportion to the enormity of the sin." "Free will," says Hegel, "is exercised in a necessarily varied externality, and the infringements of it are subjected to a correspondent variety, both as regards quality and quantity. Analogous variety of punishment is then but justice." And the growth of this radical principle in our nature, recognising the relation between sin and suffering in the gross and in proportion, might be traced out historically from its bud in a blow for a blow, through the *lex talionis* of the Mahomedan law and the sustained retaliation of the vendetta and tribal feuds, up to its full development in a representative or judicial system under which all private rights of retribution

are gathered into the hands of the State, which exercises them and redresses wrongs unbiassed by personal feelings and with an eye to the public good. This is perhaps the terminal form of justice, but within its boundaries various phases of progressive improvement are possible, and it is gratifying to observe that there is a decided tendency throughout all civilised communities—allowing for occasional sudden and short retrogressions due to panic—gradually to mitigate punishment. And this is all the more gratifying because it does not result from a laxer but from a stricter appreciation of law and punishment. "It is because the many so correctly regard the law that we can afford to punish less the few who break it." In this way we discover that the character and amount of penalty do not depend altogether on notions of abstract justice, but also on the social condition of a particular people, and that with rising culture and refinement comes a gradual mitigation of punishment and increasing exactitude in inquiring into the moral nature of punishable acts and into the legitimate range of punishment. We cannot now tolerate haphazard justice or wholesale executions, nor can we rest satisfied with mere legal guilt and an assurance that the law must punish all whom its threats would or might deter, but we insist on a nice measurement of the moral quality of the act in question in each particular case, and on the adjustment of the sentence to the condition and opportunities of the criminal, to his education, training, environment, and intentions, and to the nature of the temptations by which he was beset. Rigid legal maxims will not now suffice. They must be softened and moulded in the minds of a humane judge and jury, and adapted in some degree to the public sentiment of the period, which will not, I think, in these days sanction a technical adherence in practice to that deterrent theory of punishment which Lord Bramwell upholds. All, he maintains, whom the law threatens and who understand its threats should when they commit crime be punished; and he has the courage of his convictions, for he argues that all madmen who understand the law's threat and fall into crime should be punished, even although it is shown that by reason of their unhappy state they have not the same control over their actions that sane people have. And he goes further than this, and admits, theoretically at any rate, that madmen, by reason of their requiring a more powerful incentive to self-restraint, should be punished more severely than sane people, which brings us to the level of Chinese jurisprudence, which regards insanity not as an extenuating but as an aggravating circumstance in connexion with crime.

Now, children of tender years are, I take it, for the purposes of the present argument, in a position analogous to madmen. They are certainly quite as amenable to discipline and the deterring influences of punishment within the family circle and the school as madmen are in lunatic asylums, and they ought therefore to be liable to punishment for any crimes they may commit, notwithstanding the fact that their power of self-control is less than that of adults; nay, they ought to be punished more severely than adults, because they require, by reason of their weakness, stronger inducements to control themselves. But the law says that children under seven years of age are absolutely exempt from punishment, and that from seven to fourteen there is a presumption that they are not possessed of the degree of knowledge essential to criminality, though this presumption may be rebutted by proof to the contrary, and if the law said otherwise public sentiment would speedily revolt against the execution of a child for murder, even though it could be shown that it knew the nature and quality of its act and knew that it was doing wrong, for the general experience of mankind attests that the moral character of a homicidal act committed by a child must be very different from that of a similar act committed by an adult, and that in the former there is an immature and feeble condition of the will. And so I venture to suggest that public sentiment would revolt against the execution of lunatics—say brought out of asylums—were they dealt with as Lord Bramwell recommends, for the general experience of mankind attests that lunatics are lunatics, even when they know the nature and quality of their acts and can distinguish glibly between right and wrong, and that their power of guiding themselves is less than that of other men. It is verily what Lord Bramwell stigmatises as the "unwise mercy of judges and juries," together with the clemency of the Crown, that has made the present state of the law relating to insanity and crime endurable. This has been felt by judges not less than by medical men. The law relating to insanity and crime would, if strictly enforced, says Mr. Justice Stephen, "have monstrous consequences." "I concur most strongly," said the late Lord Chief Justice Cockburn, "in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware that he is about to do a wrong thing, the will becomes overpowered by an irresistible impulse." "I remember a case," says Lord Blackburn, "in which I felt it quite impossible to say that the prisoner should be punished, although on the definition you would be obliged to say she was guilty."

It is clear that the judges do in practice impart some elasticity to the legal rule, and it is fortunate that they do so, for the execution of persons known to be lunatics and guilty of murder because they retain a knowledge of the nature and quality of their acts and of the wrongness of them could scarcely fail to have pernicious effects. Insanity is recognised as a terrible and deplorable disease, one of the direst afflictions that flesh is heir to; and to hang those who are thus afflicted, even when they have imbrued their masterless hands in blood, would surely draw public pity towards them, and the deterrent effects of punishment must be reduced to a minimum when detestation of the crime is swallowed up in sympathy for the criminal. The most depraved and vicious of our species become the objects of compassion and tender ministrations when prostrated by painful bodily illness, even when that illness is the direct offspring of their own folly or wickedness; and while that illness lasts a new and indulgent standard of judgment is applied to the faults of temper and character which they display. Are we, then, to be extreme to mark what is done amiss by those who are overwhelmed by mental illness—an illness that may assail the purest and noblest and best, that lays a rough hand on the finest and most sentient fibres of our being, that eclipses the brightness of life and leaves a trail of darkness after it, and are we to seize upon those thus afflicted, and, because they can mumble a formula and know a hawk from a hand-saw, inflict on them the full penalties of any offences into which they may be betrayed? We may talk as we like about legal tests and deterrence from crime, but depend upon it, gentlemen, we have not the heart to do this thing.

But I must dwell for still another moment on Lord Bramwell's deterrent theory of punishment, and submit to you that, even granting for the sake of argument that that theory is correct, he makes several assumptions in his application of it to lunatics that cannot, I think, be fully justified. Punish, he says, all whom the threat of punishment might or would deter. And punish madmen, he goes on, because "they are deterred by the threat of punishment, not perhaps as often as sane people, but still sufficiently often to make it worth while to punish them." And the answer to this is that by punishing madmen you will not in any appreciable degree increase the deterrent influences which already operate upon them. Not one lunatic in twenty realises that he is insane, and thus the vast majority of lunatics are already deterred from crime by the fear of punishment as much as it is possible for them to be. I recollect an undoubted lunatic, a medical man, who died in an asylum raving mad, and who told me that in the early stage of his mental trouble he had several times taken up his gun and walked along the road towards the house of his father-in-law, against whom he had an insane grudge; but "every time," he added, "as I came near the house a vision of Jack Ketch and the Newgate new drop rose before my mind's eye, so I always went home and put away the gun." This lunatic, as a certain number of lunatics are, was deterred up to a certain point by the dread of punishment, but he would not have been one whit more deterred had a dozen unmistakable lunatics been hanged the previous month, for he never for one moment admitted that he was a lunatic, and would not, indeed, have hesitated to shoot anyone who made such an imputation against him. But a larger number of lunatics are altogether beyond the reach of threats, and are not deterred even by the taste of punishment. I can recall the case of a man named John Henry Price—a case which was graphically reported by Dr. Maudsley—in which I was concerned as a witness, and which illustrates the truth that it is a mere waste of time to punish lunatics. This man was in an early stage of general paralysis, and had been certified for removal to Bethlehem Hospital, when he

escaped from his friends and made his way to King's-cross Station, where he caught the Great Northern night express. When near Retford he robbed a fellow-passenger, who had fallen asleep, of his watch, and, passing along the foot-board of the carriage while the train was going at full speed, made his way into another compartment, where he was found at the next station, sleeping placidly, with the watch beneath the seat. He was tried at the Doncaster Sessions, and, in spite of strong medical evidence that he was insane, was sentenced to a term of imprisonment. When liberated and handed over to his friends, he was taken back to London, where he again effected his escape, again made his way to King's-cross, and again caught the Great Northern night express. Again, when near Retford, he committed a robbery, relieving this time two sleeping fellow-passengers of their watches. He again attempted to make his way to another compartment while the train was going at full speed; but, being now unsteady from the advance of his disease, he missed his hold and fell on the embankment, where he was afterwards picked up, only slightly injured, and with the two watches in his possession. He was sent to the Nottingham Asylum, and there died in due course of general paralysis. Now, no threats or severities short of death could have deterred this man from repeating his crime with mechanical regularity whenever the opportunity occurred to him. And there are many lunatics like him. But, on the other hand, there are lunatics on whom the threat of punishment acts as a provocative of crime. The late Dr. Guy tried to show statistically that the execution of a lunatic was always followed by a crop of lunatic murders. I do not think he succeeded in his attempt, but it is incontestable that the existence of capital punishment does occasionally lead lunatics to commit murder with the same morbid desire of martyrdom which leads others to mutilate themselves in the most horrible way, or with the purpose of committing suicide indirectly. Hadfield's crime was committed under the belief that, while he was called upon, like our Saviour, to sacrifice his life for the people, it was not lawful for him to lay violent hands on himself. He had therefore, he thought, no option but to take measures which would ensure the co-operation of the public executioner.

Then, Lord Bramwell has perhaps exaggerated notions as to the utility of threats in asylum management, and is misinformed as to the methods by which discipline is maintained in such institutions. "How are mad people in asylums managed?" he asks. "Surely by the hope of some good and fear of some harm, according to their conduct." But the great advance in lunatic asylum polity in modern times has consisted in the abolition of the penal code under which they were formerly administered. Scourges, shower baths, solitary confinement, and straitwaistcoats are now no longer known in them; and the awful threats under which they are so quietly and successfully governed are—being sent to bed, deprived of tobacco, or kept away from the weekly dance. And even these petty penalties—just such as are applied to weak and wayward children—are of doubtful efficacy. In large asylums, assaults and larcenies are undoubtedly committed daily, but it has never been proposed that a stipendiary magistrate should be attached to each of them to dispense justice amongst the inmates, and their medical officers know well to what a limited extent threats or promises avail to control those who are in the grip of a brain-compelling disease. Their constant efforts are directed, not towards the enforcement of punishment or the breathing forth of threats, but towards the removal of temptation and opportunity, towards the assertion of that law of kindness which is the most potent weapon in their hands, and towards the restoration of bodily health. There are, it must be admitted, a few lunatics who, as Lord Bramwell asserts, calculate on immunity from punishment on the ground that they are reputed lunatics. I have had patients in asylums under my care who have said to me, "If you do not liberate me I shall kill you; and being on your own showing a lunatic, I shall merely be removed to Broadmoor and be no worse off than I am." But it is on the very rarest occasions that lunatics who thus speculate on their chances of escaping punishment perpetrate any punishable act. Their speculations include doubts as to their complete safety under the circumstances which they suggest, and of course they are prescient enough to know that their confinement in Broadmoor would be life-long. I have never in my own experience encountered a case of homicide by a cunning lunatic, who had deliberately counted on not being punished; and as an asylum officer I should have felt that my personal safety was not in any degree enhanced, but rather endangered, by the execution of murderers acknowledged to be insane.

After the criticisms which I have ventured to offer on Lord Bramwell's thesis that all lunatics who would or might be deterred by the threat of punishment should be punished, it may sound paradoxical to say that I am disposed to assent to it. And yet that statement would be correct, for where I, and I believe I may add the medical profession, differ from Lord Bramwell is not as to the principle he lays down, but as to his application of it. We are prepared to admit that amenability to threats is in a sense the true test of responsibility, but we cannot allow that the understanding of the threat is any criterion of the amenability to it, or that the boundaries of responsibility which he has drawn correspond with those which our professional experience delineates. The lunatic who can respect a threat has a free will, while the lunatic upon whom a threat has no influence is under the thraldom of disease; and the test of insanity which commends itself to medical men was never more clearly and succinctly expressed than by Lord Bramwell himself when in the Dove case he asked, "Could he help it?" Could he or she help it? That is the real practical question at issue in every case in which the defence of insanity is set up. Was the lunatic free to choose, or under the duress of disease? Was his will capable or inept? But Lord Bramwell and those who think with him argue that it is sufficiently proved that the lunatic could help it if he knew the nature of his act—viz., that it was killing; the quality of his act—viz., that it was a crime; and also that it was wrong in the sense of being forbidden by law. Whereas, medical men, almost without exception, maintain that a lunatic may be able to know and express the nature and quality of an act and its wrongness, and yet be as unable to resist doing it as he is to abstain from jumping under a smart electric shock; and that knowledge of the nature and quality of an act and its wrongness is not in the regions of pathology any measure of will power. And not only medical men, but judges, have perceived this. The late Lord Chief Justice Cockburn said: "The power of self-control, when destroyed or suspended by mental disease, becomes, I think, an essential element in the question of responsibility." And Mr. Justice Stephen has said: "It ought to be the law of England that no act is a crime if the person who does it is at the time when it is done prevented by defective mental power, or by any disease affecting his mind from controlling his own conduct, unless the absence of the power of self-control has been produced by his own default." This statement of the law, which has been verbally amended by Dr. Bucknill, really covers all that medical men have ever contended for, and, having received it from so high an authority, it is their duty to do their best to secure its acceptance, and provide trustworthy tests of loss of self-control.

Now, impairment of will, or loss of self-control, more or less pronounced, is, according to medical men, the first, last, and universal element in insanity, and ranges from a trifling reduction in the check action which we exercise on the ordinary currents of thought and feeling down to paralysis of the sphincters. Dissolution—and insanity is dissolution—implies a reversal of evolution, and in insanity we have, as Dr. Hughlings Jackson (the great brain-seer of the century) has taught us, a process of undevelopment, or taking to pieces, in the highest centres, which are the crown or climax of nervous evolution. In it we have "a descent from the least organised, most complex, and most voluntary, towards the most organised, most simple, and least voluntary." The lunatic is reduced to a lower level of evolution, is less of a man and more of an animal, or a machine, and according as the reduction takes place, uniformly or locally, we have general or partial insanity, the different varieties of the latter being dependent on the different degrees in which the nerve centres are morbidly affected. But in every case of insanity, whether general or partial, the highest centres are involved, and involved in a negative direction—that is to say, towards enfeeblement of their functions. There is in every case of insanity impairment of voluntary control, and as a consequence of this there is more or less licence given to those lower mental functions which are during sanity under voluntary control, and which become then over-active, their over-activity being expressed in delusions, hallucinations, wild and whirling words, and extravagant actions.

"When the Government of a country is destroyed," says Hughlings Jackson, "we have two causes of lamentation—the loss of the services of eminent men and the anarchy of the uncontrolled masses"; and when the government of the brain is overthrown by insanity we have to deplore the loss of the regulating will and the turbulence of subordinate mental powers.

The dominion of the will in initiating and inhibiting action varies greatly at different ages, and in the same person under different conditions, and even within the sphere of health we see that the will may be overpowered by the urgency of sense impressions, when actions ordinarily under voluntary control are performed as inevitably as the pulsations of the heart or the contraction of the pupil of the eye under the stimulus of light. A slight tickling of the sole of the foot may be endured without movement by a person of resolution, but a severe tickling unavoidably in a person of sensitive organisation results in wriggling and laughter. Extraordinary instances are on record of power in suppressing the natural manifestations of suffering under sensory impressions of an excruciating kind. Thus the North American Indians, when subjected to the most cruel and malignant tortures, tied naked to a stake, having their bodies mangled with knives, their limbs burnt with red-hot irons and their nails plucked out by the roots, used to continue to chant their death-song with a firm voice, boast of their exploits, and insult their tormentors; and it is told of Almanzor, the great Kalif of Cordova, that he sat calmly at a council of Vizirs, debating affairs of State, while his leg was being cauterised by a red-hot iron, until the chamber was filled with the smell of burnt flesh. But such fortitude or insensibility is all but unknown in these days; and although great differences in the character and intensity of the reactions to painful impressions, as is seen in the deportment of men and boys under the lash, sensations of a certain poignancy will, in ninety-nine persons out of a hundred, cause writhings and exclamations. Not the staunchest determination or the most pressing motives can prevent these. Those of us who have witnessed operations without anæsthetics are aware that the patient struggles under the knife even when fully alive to the fact that by so doing he but aggravates his sufferings and the risks of his situation. The certainty of instant death could not hinder his struggles under such circumstances, and the law would assuredly not declare him responsible for assaults committed at such a time on those who were holding him down. The law does, under certain circumstances, recognise the fact that there may be not only sensations, but passions so violent and impetuous as to sweep away at once any barriers which it is possible for the will to erect and constitute legal compulsion. And whenever the confines of health are overstepped, the incompetency of the will to restrain the reactions of centres in a state of hyper-activity, owing either to the withdrawal of the inhibitory action of higher centres upon them, or to this withdrawal *plus* inherent instability, becomes very apparent. When the motor centres of the spinal cord are saturated with strychnia, they display a reflex excitability so enormously increased that a breath of air inpinging on the skin, or a loud sound invading the ear, or a bright light falling on the retina, is sufficient to originate severe muscular spasms in spite of a strong resolve to keep still, fortified by an intense dread of the pain which accompanies the spasms. Here the irritability of the cord is so increased and the resistance to radiation so greatly diminished, that a degree of irritation that normally would excite limited action is sufficient to induce widespread contraction. And here we have evidence that the reaction in a nerve centre varies not only according to the intensity of stimulation, but according to its vital condition for the time being; and of all vital conditions in a centre, none more certainly increases its reflex excitability than the withdrawal from it of the influence of higher and inhibitory centres. The removal of the cerebral centres notably increases the reflex excitability of the spinal cord. Schiff has shown that reflex movements in the tail of a decapitated lizard increase in vigour as segments of the cord are successively removed from above downwards. And within the cerebral hemispheres themselves the same thing holds good, and lower centres become more excitable just in proportion as higher centres are enfeebled or defunctionalised. Whenever the centres of volitional inhibition are weakened, or whenever their influence is temporarily in abeyance, the centres beneath them respond excessively to peripheral impressions. When our attention is withdrawn—as, for instance, when we have dropped into a reverie or are just falling asleep,—a sound that might have made us turn our heads, if on the alert, will cause us to start violently; and when in insanity volition is impaired, sensations that would have been almost unnoticed in health stir up morbid feelings. Did time permit, I think I could establish that affinitive sights, sounds, smells, tastes, and surface impressions, as well as organic sensations, play a larger part than is generally supposed in the induction of morbid impulses when the regulating brain centres are weakened. Many sane persons have experienced horrid promptings when standing looking over a precipice or gazing at a passing train, and amongst the insane the glitter of a knife or the crackling of a fire will sometimes evoke suicidal or homicidal impulses which but for it might have remained dormant. Of course the inhibitory centres are not equally developed or educated in all, nor are they all equally developed in the same individual in respect to particular tendencies to action, and hence the great variety of insane impulses that are encountered. Every man has his beseting sin—his thorn in the flesh, and this it is that is apt to rise into prominence during inhibitory paresis, being agitated either by affinitive peripheral impressions or ideal revivals. Left to themselves, ideas have a divergent tendency. Unless some strong, continuous, or frequently repeated outward impression gives persistence to one idea, the tendency is for another allied but slightly different idea to grow out of it, and another out of that, and so on along the lines of association, until a point is reached altogether remote from the original starting point. But with the morbid ideas out of which criminal impulses arise the case is otherwise. These seem to move in a circle. Consciousness revolves round and round through a few closely allied representations; while the narrower the circle is, the more likely is the ideational condition to pass over into action. The larger the sweep of the circle, the more numerous are the points upon which inhibition may impinge; the smaller the sweep of the circle, the less purchase has inhibition. The lunatic who can only shout "Blood! blood! Kill! kill!" is in a highly dangerous condition.

Will is the link between feeling and action, and when it is impaired it ceases to be available to prevent the transmutation of the energy of feeling into the energy of motion. And here we have an explanation of the utter inadequacy of the motives that constantly lead to insane crimes. There is no check action; there is an abbreviation of that pause that gives time for foresight and reflection. "Must give us pause!" says Hamlet when on the brink of suicide—time to summon up the forces of rational resistance. Man is a hesitating animal. The whole system of Zoroaster hinges on the fact that everything noxious and evil in creation is the work of Arhiman, an independent power, whose wickedness depends on the fact that he acts before he thinks; whereas Ormuzd, the good spirit, thinks before he acts. And madmen may in many instances be distinguished from sane men in the same way. The impulsive madman acts before he thinks; feeling is translated into action with reflex precipitancy, with an abbreviation of that time interval between stimulus and response which can now be subjected to experimental measurement, in the absence, therefore, of all restraining considerations, and in a violent and disproportionate manner. I have known an epileptic kill his attendant, beating his head into jelly, because he had prevented him from taking his daily walk. I have known another epileptic hang himself because a smaller portion of bread-and-butter had been served out to him than to his companions; and, in the recent case at Weston-super-Mare, the lad Hitchins shot his sister because of some trifling slight which she had put upon him. In all such cases a momentary irritation, a natural feeling of chagrin, such as we all feel when thwarted or disparaged, instead of being inhibited in its nascent state when inhibition is most powerful, so that the reaction to it may be reduced by deliberation to rational proportions, is, by the diminished resistance of the will and the consequent over-action of the lower centres, permitted to become fixed or to express itself in a grossly exaggerated manner. And such a morbid state of mind once very nearly deprived the world of all the wholesome delight that it has derived and will long continue to derive from the Waverley Novels. When Sir Walter Scott was an infant eighteen months old and out of health, he was sent to the farmhouse of Sandy Knowe in charge of a maidservant. "The damsel," says Sir Walter, in his Autobiographical Notes, "had left her heart behind her in the

keeping of some wild fellow who, it is likely, had done and said more to her than he was like to make good. She became extremely desirous to return to Edinburgh, and as my mother made a point of her remaining where she was, she contracted a sort of hatred of poor me as the cause of her being detained at Sandy Knowe. This rose, I suppose, to a sort of delirium, for she confessed to Alison Wilson, the housekeeper, that she had carried me up to the Craigs, meaning, under a strong temptation, to cut my throat with her scissors and bury me in the moss. She was dismissed, and afterwards became a lunatic."

(To be concluded.)

Address
ON
ANÆSTHETICS.

Delivered before the Bath Pathological and Clinical Society, Feb. 14th, 1888,

BY W. M. BEAUMONT, M.R.C.S.

MR. PRESIDENT AND GENTLEMEN,—I think I am stating a commonplace when I say that in many operations the most responsible and onerous duty falls on the anæsthetist. In minor surgery the question which weighs most on the mind of the patient, and the one which he inquires most anxiously about, is whether he is or is not a good subject for an anæsthetic. Will his sleep be temporary, or is anæsthesia merely another name for euthanasia? Small as his danger is, it is ever present; we can never say there is no risk; we are incapable of prognosticating; we can only rely on the doctrine of chances. What a fearful confession of our impotence is this—what a humiliating one! The patient, it may be in the flower of his strength, apparently sound in heart and lung, the very picture of robust and manly vigour, trusts implicitly in the skill of the surgeon. For some trifling operation he inhales the pain-killing vapour, and in a few minutes lies a corpse upon the table. The administration of anæsthetics is one, then, of supreme importance to us as medical men, whilst it is one of those duties which we are constantly called upon to perform.

Our responsibility to a patient is perhaps more personal and more obvious when he is anæsthetised than at any other time. The very rareness of a death intensifies this responsibility, and although to the professional expert the cause of death may be doubtful and inexplicable, yet to the British public no difficulties occur. The patient has been anæsthetised; he has died; *ergo* the surgeon, from want of skill, has killed him. It is as simple as the rule of three, and as evident as a syllogism. In my student days no systematic instruction in the administration of anæsthetics was attempted. It had to be picked up haphazard, and was included in no course of lectures or demonstrations. Whilst the senior hospital surgeon does not consider it beneath his dignity to perform some petty operation in minor surgery, the infinitely more responsible post of anæsthetist is entrusted to the senior student. But although the danger connected with the inhalation may be infinitesimal, yet our ignorance of any means of foreknowing who will take the anæsthetic well or who badly should remind us that we ought to be always prepared for any emergency. A watchful eye on heart and lung is probably the most important characteristic of a good administrator. He should take absolutely no interest in the details of the operation, or he will miss the few storm signals that nature gives of coming dangers. How, then, can he minimise those dangers?

Let us consider what would render an anæsthetic perfect. First, it should be pleasant to take; secondly, it should produce perfect analgesia; thirdly, it should have no paralysing action on respiration or pulsation; fourthly, it should be followed by quick return to consciousness after the administration is withheld; and fifthly, it should be characterised by an absence of sickness, depression, and objectionable sequelæ. From the enumeration of these five points it is clear that we have no perfect anæsthetic. We have not one that fulfils all these requirements. Which anæsthetic shall be used in a given case depends on the fancy, the prejudice, or the opinion—call it which you will—of the administrator. And here I would say that the choice should be left to him, and not to the operating surgeon. Let the surgeon be responsible for the surgery, the anæsthetist for the anæsthesia. We have, as far as I know, no authoritative rule to guide us in the selection of an anæsthetic. It is remarkable that the Collective Investigation Committee of the British Medical Association has not taken up the subject, and collected statistics of their comparative safety, of the relative frequency of vomiting and struggling, and of other points with regard to sex, age, &c. Cards might be issued to the various hospitals of the country, and in twelve months a mass of valuable details might be collected, from which fixed laws could be deduced. It is impossible for single individuals to do much. "Another death from chloroform," as the newspapers express it, occurs but once in many thousand inhalations. How, then, can one administrator judge of the comparative safety of any anæsthetic? Personally, I prefer ether for general use; but I do not believe in having one anæsthetic, and administering it in season and out, any more than I believe in one purgative, one expectorant, or one anything else. In midwifery I use chloroform, because it is convenient to administer, and because, for some unexplained reason, it appears to be almost absolutely safe in lying-in cases. Whether any other anæsthetic may not be as reliable I cannot say. I should not give ether in bronchitis or to children; neither should I give chloroform in endocarditis. Bichloride of methylene I have an unscientific prejudice against, and I seldom administer it from choice. It appears to be a favourite in ophthalmic surgery, possibly from the supposition that it seldom causes sickness. My experience of it, which is not great, does not bear out this supposition. I find that during the last two years and a half I have administered ether seventy-five times, chloroform twenty-two times, and bichloride of methylene thirty-one times; in all, 128 administrations, omitting other anæsthetics. Vomiting occurred thirteen times after ether, five times after chloroform, and eight times after methylene; or a percentage of 17·33 for ether, 22·72 for chloroform, and 25·80 for methylene. Of course, one ought to compare thousands of cases before dogmatising, but the figures, as far as they go, seem to show that methylene is oftener followed by sickness than either chloroform or ether. I invariably use Robbins's ether, which appears to me to be less often accompanied by struggling than that of other makers; and I administer it in a Clover's apparatus. The chloroform I prefer is Duncan and Flockhart's, and the methylene Robbins's. Struggling only occurred four times in the seventy-five administrations of ether—i.e., 5·33 per cent. Of other anæsthetics I can say but little from personal experience. The A.C.E. mixture I seldom employ, but I cannot help thinking that nitrous oxide is not sufficiently used in general surgery. Hospitals, as a rule, I believe, have no apparatus for its administration, and yet what a vast amount of real suffering, though of short duration, might be saved by its help. The opening of abscesses and removal of surgical dressings are instances in point. The local application of ether is too often as painful as the surgical procedure it is intended to relieve.

In conclusion, gentlemen, I cannot help thinking that the selection of an anæsthetic is too empirical. We wander aimlessly along without having any firm ground on which to walk. Were a collective investigation made throughout the hospitals of the country, we should then be able to get rid of the "personal equation" altogether and avoid the quicksands of mere opinion. And what a terrible word that word "opinion" is! A "professional opinion" may have satisfied a bygone generation of our brethren; it may console the general public of to-day; but it behoves us not to rest content until we can give a scientific reason.

ESSEX AND HERTS BENEVOLENT MEDICAL SOCIETY.—Last week the annual court of audit of this Society was held at the Great Eastern Hotel, Liverpool-street. Mr. C. F. Hodson of Bishop Stortford, one of the trustees, presided. There was a good attendance, and several new members were elected. Petitions were received from fifteen widows, orphans, and members, and grants made amounting to £380. It was resolved to establish a new district court in the west of Hertfordshire. After the conclusion of the business the members dined at the hotel, Dr. Robert Barnes presiding.

SOME REMARKS ON THE

USE OF ELECTRICITY IN GYNÆCOLOGY.

BY W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.,

PROFESSOR OF OBSTETRIC MEDICINE IN KING'S COLLEGE, AND PHYSICIAN FOR THE DISEASES OF WOMEN AND CHILDREN TO KING'S COLLEGE HOSPITAL.

(*Concluded from page 105.*)

2. THE electrical method has been much talked of as a means of promoting the absorption of large non-hæmorrhagic fibroids. For this purpose the negative current is introduced into the substance of the tumour by puncture. It has always seemed to me that this is the least promising application of electricity, and presumably the most dangerous. It is one thing to apply the electrical current to an unbroken surface, as is done when the hæmostatic influence of the positive pole is used, and quite another thing to introduce it into the tissues by puncture. Moreover, there are very few non-hæmorrhagic fibroids which call for interference at all. The great majority of them produce no symptoms, and had much better be left alone. I have therefore only felt justified in trying this plan in two cases, in both of which there were serious symptoms arising from the pressure of a large fibroid incarcerated in the pelvic cavity. In one of these the result has been so far altogether satisfactory; in the other, although the tumour has practically disappeared, there has been so much constitutional disturbance and local mischief, that I look upon the case as being very much the reverse of satisfactory; and, although it may be accidental and exceptional, I should be sorry to have to deal with a second case of the kind.

(*a*) Miss E——, aged thirty-two, was sent to me by Dr. Stephens, of Brighton. For more than a year she had not been able to pass urine, and the catheter had always been used. She had also severe pelvic pains, and tenesmus. I found a hard nodulated fibroid, which reached about three inches above the pelvic brim, and which per vaginam was found almost to block up the pelvis, pressing much on the rectum and urethra. The cervix was high up to the left, and was reached with difficulty. This seemed to me a good case for trying the absorptive influence of the negative current, and on Feb. 22nd I punctured the tumour to the depth of about a quarter of an inch, and passed a current of 50 milliampères. Between that date and May 11th I made five electro-punctures, not exceeding 100 milliampères. There was no constitutional disturbance, nor pain of any kind. The result was very striking, for in May the intra-pelvic mass had so much lessened in size that all pressure symptoms had ceased. She could micturate with perfect ease, and had no longer any complaint to make of pain and bearing down. On June 9th she writes: "I am now feeling quite well, and hope I shall continue so." On July 5th Dr. Stephens reports: "The patient now suffers hardly any pain. There is no retention of urine, the periods are more normal, and the health is generally improved. The tumour itself appears as when you last saw her, possibly slightly smaller."

(*b*) Mrs. W——, aged thirty-nine; has been married seventeen years; three children, the youngest eight years of age. Previous to the birth of the last child I detected a fibroid outgrowth on the posterior uterine wall, about the size of a large orange. It had no effect on labour, which was easy. Since that time it had been growing steadily, and the discomfort and inconvenience caused by it had got much worse. She had constant bearing-down pain of a severe character, and pressure on the bowel rendered defecation painful and difficult. Latterly the tumour reached to within nine centimetres of the umbilicus, with a large separate lobe to the left. Between the anterior superior spines of the ilia it measured thirty-seven centimetres. In the pelvis there was a large smooth mass about the size of a melon. The cervix was displaced forwards, and was reached with difficulty. Five electro-negative punctures were made at intervals of a week, varying from 50 to 150 milliampères. The first four were followed by no unpleasant effect. After the fifth the patient had an offensive watery discharge from the uterus, so abundant as to saturate the bedclothes constantly. The temperature ranged from 101° to 102°. There was no pain, no fixing of the uterus, no cellulitis. The only marked symptom was the peculiar bad-smelling discharge, which was expelled from the uterus in gushes several times daily. It was quite watery and transparent, and scarcely stained the linen. Coincident with this was observed a rapid diminution in the size of the tumour, which at last could not be felt above the brim of the pelvis, and per vaginam was not above the size of an orange. This state of things continued for many weeks, and I sent the patient down to Brighton, when she began slowly to gain strength and flesh, although the discharge continued as highly offensive as before, but was gradually becoming purulent in character. So far as could be made out, it always came from the uterus. Eventually Mr. Arthur Nicholson, under whose care she was, reported to me that he thought the discharge was now coming from a point in the vagina. I went down and found that there was a minute opening in the posterior vaginal wall, from which a drop of pus was seen to be oozing. This I dilated freely, and gained access to a cavity from which a quantity of fetid pus escaped. This was only a few days ago, and Mr. Nicholson since reports: "The tumour, to feel bimanually, is not bigger than a small orange. Mrs. W—— is much better generally since the opening up of the sinus."

The first of these cases shows that the contention that negative electro-puncture is capable of promoting absorption of a fibroid is true, so far as that case is concerned. The second equally proves that it may be attended with serious consequences. I am not disposed to conclude from one unfavourable case that the use of this application of electricity should be abandoned, any more than I should conclude from a fatal ovariotomy that that operation is illegitimate; but I think it should teach us that it is not without risk, and that it should not be lightly resorted to, nor unless there is some good reason for interfering with the tumour. It is fair to add that I took Dr. Apostoli to see this case when he was at Brighton, and that he assured me he had not seen anything of the kind before, and attributed it to septic absorption at the seat of puncture.

3. The use of the negative intra-uterine electrode has been recommended in cases of dysmenorrhœa dependent on stenosis of the os or cervical canal, in membranous dysmenorrhœa, and in severe chronic uterine catarrh, with much glairy tenacious discharge. It seems in these to act as destructive caustic, enlarging the cervical canal in stenosis, and in the others probably acting as a form of intra-uterine medication. It has, however, this great advantage over other kinds of intra-uterine medication, that the introduction of the sound is not only easier and less painful than that of a probe covered with cotton-wool or any similar contrivance, but that the precise degree of effect can be graduated to a nicety by the galvanometer. I have used it in three cases of dysmenorrhœa depending on pin-hole os and conical cervix, in one case of membranous dysmenorrhœa, and eight cases of chronic uterine catarrh, several of them associated with dysmenorrhœa. Every one of these has been greatly bettered, if not altogether cured; and I am satisfied that this constitutes not only the neatest and least distressing, but also the most effectual, method of intra-uterine medication at our disposal, and that which requires by far the fewest applications. One example of each of these classes of case will suffice by way of illustration.

(*a*) Mrs. B——, the wife of a dentist, aged twenty-four; married two years and a half; no family. The menstruation is always acutely painful, and has been so since it began. She is quite well in the interval. There is a distinctly conical cervix, with a minute pin-hole os. On Nov. 1st and 22nd I made two applications of the intra-uterine negative electrode of 50 and 100 milliampères. On Dec. 4th she wrote: "I am pleased to be able to tell you that your treatment of galvanism has so far proved successful that my last period was entirely free from pain." Again on March 3rd she wrote: "I am glad to say that my periods are now entirely without pain." So far as one can judge, therefore, here is a case of bad dysmenorrhœa, which had persisted since the establishment of puberty, cured by two applications only.

(*b*) Mrs. ——, aged thirty-six. This lady is the wife of a distinguished member of the profession, whose careful observation and report of the case makes it particularly reliable. On the whole it is the most marked and persistent case of membranous dysmenorrhœa I have ever met with. This patient has been under my care, with intervals, since 1885. She had much and severe pain, and regularly shed large membranes at each period, forming complete casts of the endometrium. I had treated her by intra-uterine

medication with carbolic acid, with some improvement as to her general and local symptoms, but none, I think, as to the prominent point—the severe dysmenorrhœa and the expulsion of membrane. In February I determined to try the effect of the negative intra-uterine current. Between February and June I made ten applications of from 10 to 50 milliampères. Her husband reports at intervals as follows:—Feb. 21st: "On the first three days of the period there was a marked improvement. On the fourth day the usual membrane came away in three pieces without pain. The chief difference between this and the former periods is that the membrane came away in shreds instead of in a single piece as formerly."—April 4th: "The period lasted three days without any sign of membrane, except the smallest shred on Sunday. On that evening the discharge ceased, and we thought you had made a wonderful cure, as the membrane had hitherto come with perfect regularity on the third day. On Monday, however, her period recurred, and there was a discharge of membrane smaller and thinner than before. I think that, on the whole, she is decidedly better."—June 27th: "I have a good report to give. There was no sign of malaise or pain before the commencement of the period, and until this morning we quite thought that no membrane was going to appear. This morning a clot had passed, in the centre of which I found a thin, elongated, membranous shred; the thing was so thin and small that it would have escaped notice but for careful examination."—July 7th: "I believe you have accomplished what I must confess I thought an utter impossibility—viz., the removal of the formation of a membranous cast, which had appeared with the most absolute regularity for just upon twenty years. My wife looks better and feels better than she has done for many years." I have given this report in the words of her husband, whose name, could I mention it, would at once be recognised as a guarantee for scientific and accurate observation. There can be no doubt that the improvement here was absolutely due to the electrical treatment, since every known means of bettering this very obstinate and severe case had already been unsuccessfully tried.

(c) Mrs. S. G——, aged twenty-seven; married three years. Never well since marriage. The chief troubles were severe bearing-down pain, prolonged and painful menstruation, and very profuse muco-purulent discharge oozing from the cervix. This patient was a curious illustration of what this type of case often goes through. She had been in the hands of several physicians, and had undergone much treatment, amongst other things division of the cervix. I first saw her in October, 1887. Antecedent to that date she had been confined to her bed or sofa for six months, for many weeks she had had leeches applied twice a week to the cervix, and she had been regularly visited three times a week by a prominent gynæcologist, and yet her state was worse at the end of that six months than it was at the beginning. I made four applications of the electro-negative current in November of from 50 to 100 milliampères. On Dec. 15th she wrote: "I am truly grateful for having been cured so quickly. I had given up all hope of ever being well again, and now I am glad to say the discharge has quite stopped." I have not seen this patient since; but on June 10th she wrote, in answer to my inquiries, "I am glad to say that I have been quite well for the past five months, not having any of my old troubles."

Now these three cases are illustrations of types of disease the intractableness of which to treatment every gynæcologist will admit. For the first class a surgical operation, not altogether free of risk, is often performed; the second and third exhaust the patience and the resources of the medical attendant. In a former contribution to this journal[1] on the treatment of the last class of case, in which I advocated intra-uterine medication, I quoted the dictum of no less high an authority than Scanzoni, to the effect that he considered them incurable. If, then, some of them—my experience does not justify me in saying how many—can be cured by a few applications of a method involving nothing more painful than the passage of a sound, I venture to insist that a decided advance in gynæcological therapeutics has been made.

4. There are some minor applications of electricity, such as in chronic inflammatory exudations, of which I have no experience, and also the use of the faradaic current for the relief of pain and in amenorrhœa. The latter I have tried three times. I may say that I believe very few cases of amenorrhœa call for or justify any treatment whatever, except constitutional. Most of those I see are associated with chronic neurotic conditions and depressed general health, and when these are righted menstruation will generally right itself also. I believe, however, that intra-uterine faradisation has a powerful influence in promoting the re-establishment of menstruation in the exceptional cases in which there is some indication for using it. In one of my cases the patient had not menstruated for five years. After three or four intra-uterine faradisations the period recurred, and has since done so regularly. In this case I was tempted to try it because of pelvic pain and malaise, coincident with improving general health, which recurred at monthly intervals, as if the discharge was endeavouring to come on. In another case the patient had been for four years an almost bedridden neurotic, quite unable to walk except a few steps on crutches. As is almost invariably the case in such illnesses, menstruation was entirely arrested. She quite recovered under systematic treatment, but menstruation did not reappear. As often happens with women suffering from amenorrhœa, she attached exaggerated importance to this, and I felt certain that nothing would tend to maintain her cure so much as the recurrence of menstruation. I therefore tried intra-uterine faradisation, and after three applications it was completely successful. In the third case it entirely failed. The two in which it succeeded, however, are sufficient to prove that it has a powerful influence, although it is a use of electricity of very secondary importance to those previously described.

In thus detailing my experience of electricity in gynæcological work, limited although it necessarily is, I have no pretension to settle a question that requires much study before it can be placed on a satisfactory footing. There are many points in connexion with it on which I have not even touched—such as the methods of application, its difficulties, and its possible dangers. I have endeavoured only to state facts, and have given chapter and verse for my statements. I venture to think that the cases I have related are sufficient to prove that in electricity as applied to uterine disease we have a therapeutic agent of considerable power, which may do much good, even if in rash and inexperienced hands it may do much harm. That is a peculiarity it shares with every treatment which is powerful at all. That it may be thoroughly and impartially investigated without favour, but also without unreasonable prejudice against it, is all that anyone can desire.

George-street, Hanover-square, W.

[1] Lectures on the Treatment of Chronic Uterine Catarrh, THE LANCET, 1874.

DENGUE IN EGYPT.

BY F. M. SANDWITH,
LATE VICE-DIRECTOR OF THE SANITARY DEPARTMENT OF EGYPT.

(*Concluded from p. 109.*)

Height of the Nile.—Since time immemorial there has been a tendency in Egypt to attribute misfortune to the maximum height of the Nile, and this idea to a modified extent still exists. When therefore, in 1887, a fever appeared in Cairo about the same date as a high Nile which would undoubtedly have overflowed its banks if it had not been for the skill and watchfulness of the English officers of irrigation, it was at once accepted that the fever had been caused by excessive infiltration of the soil. The Nile at Cairo rose in September to a height of 25 pics, and was described as a regular but excessively high rise. The average height at Cairo is 22¾ pics. Returning for a moment to 1779, the year in which dengue was first known in Egypt, I find that there was a high Nile of 24 pics, and Gaberti wrote of that year that "there was an exceptionally high Nile which even flowed over the dam in the Khalig, thus preventing the usual cutting of this dam, which is an annual ceremony of great antiquity." Though this only proves that the dam was of insufficient height, it looks at first sight as if it were a confirmation of the theory. Unfortunately the record of other years does not corroborate it. In 1845 there was dengue in Cairo, associated with a low Nile of 20½ pics; and again in 1880 Cairo was revisited by the fever, along with a low Nile, which varied in height from 19 to 21½ pics. Turning to other years when dengue has been completely absent from Cairo, we find that in 1874

and 1878 there were excessively high Niles of 26½ pics, and again in 1876 and 1879 very high rises of 24½ pics. A maximum height of the river at Cairo is not therefore enough in itself to induce dengue to transfer itself to the capital from coast towns such as Ismailia. Moreover, it must be remembered that Cairo has only been visited four times by the fever, while it has been present in the country which is uninfluenced by the rise of the Nile no less than thirteen times. The conclusion would seem to be that dengue, with its unexplained affection for coasts, rainy seasons, and large rivers, only appears in Egypt when the Nile is in its annual flood, but that an extra high rise cannot in any way be regarded as the exciting cause of its appearance. In both the recent epidemics Alexandria has suffered, though not in any way dependent for atmospheric conditions upon the Nile.

Contagion.—I know of no reasons for supposing that dengue can be generated *de novo*. It is a disease apparently not endemic to Egypt, and it would appear that its presence in the interior of the country is always associated with cases upon the banks of the Suez Canal, while upon several occasions sporadic, and even epidemic, cases have existed upon the canal, and have not spread to Alexandria or to the interior. There is at present no means of deciding whether dengue enters Egypt by the Suez Canal from abroad, or whether the poison has the power of lying latent upon the coast, and occasionally spreading into the country. During an epidemic, if not at other times, there would certainly seem to be a poison in dengue which is communicable from the sick to the healthy. I have already spoken of the great numbers of people (? four-fifths) attacked during the epidemics, but this is not likely to influence anti-contagionists, who say that masses are attacked because they are all subject to the same conditions. (*a*) When dengue commences in a house it spares few of the inmates, as the following examples will show: In house No. 1 there were eighteen Greeks, Italians, and Egyptians, of whom twelve had dengue during September and October. In house No. 2 there were twenty-four people—English, French, Italian, Greek, Egyptians, and Hindus, of whom eighteen suffered from dengue between Oct. 6th and Nov. 22nd. One of the six who escaped had had the disease in India. Three of the men employed in the house were married and slept in their own homes, and in each case the wives contracted the disease within ten days of their husbands. Six of the patients returned to the house direct from Europe, and contracted the disease in periods varying from nine to twenty days after arrival. In this case, as in all others, a new patient was affected every few days, no great number of sick in any one house being all down at the same time. In house No. 3 there were twenty-three—Turks, Tunisians, and Egyptians; of these, eighteen had dengue, some very severely, with delirium. In house No. 4 there were twenty-eight, English and Egyptians, of whom fourteen had the disease. In house No. 5, a hotel, forty *employés* out of forty-five were attacked, and eight visitors out of twelve. The cases all occurred within five weeks, between Sept. 20th and Oct. 25th. The hotel porter became ill only two days after arrival from Europe, and the manager was attacked four days after leaving Alexandria, where dengue was then unknown. This man suffered from the disease in Cairo in 1880, when nine people in his house out of a total of ten were laid low by dengue. In house No. 6 there were twelve English and Egyptians, of whom seven succumbed. The first case was that of a native, who slept in the pantry; the second was the butler, who worked by day in the pantry; the third was a maid, who nursed the butler; the fourth was the mistress, who nursed the maid; and the fifth was the husband of the mistress. In house No. 7, a Turkish harem, there were twenty people, including slaves, every one of whom caught the fever. Thus in these seven houses there were 182 persons, of whom 137, or 75·3 per cent., suffered from the epidemic. I have purposely only chosen large houses for these figures, taken from different districts of Cairo. The smaller houses of my patients, each containing less than a dozen occupants, suffered in much the same proportion, many not being able to boast of a single case of immunity. (*b*) On the other hand, many houses in infected quarters of the town, standing within their own grounds, escaped the disease entirely. As an instance of this there were thirty Turks and Egyptians living in one harem who escaped absolutely. At Kasr-el-Aini Hospital, to which dengue patients did not think it worth while to come, there were about 400 patients, practically none of whom suffered. There were, moreover, almost no cases among the nurses, though a few of the students contracted the disease in the town. The English troops quartered at the citadel and in the suburb of Abbassiyeh, suffered decidedly less than the civilian population in the town, while the Egyptian soldiers also at Abbassiyeh enjoyed a still greater immunity. The fever, moreover, did not spread to the outlying suburbs of Helonan and the Pyramids, in spite of daily communication with Cairo. (*c*) Do attendants on the sick contract dengue? Of fourteen cases of married English people, in nine instances both husband and wife were affected, but not synchronously, and in the remaining five cases the wives alone suffered. Of eleven European civilian doctors who attended patients during the epidemic, ten caught the fever, and in the cases of two who were married the wives also suffered; the wife of the eleventh contracted the disease. The army doctors and hospital orderlies enjoyed a great immunity, which may have been due to their patients being seen in a very airy and spacious hospital. Of three nursing sisters, only one was attacked. In the German Hospital there were fifteen cases of dengue; all the nurses escaped infection, but one kitchen maid took the disease. (*d*) Dengue may be imported by infected persons into towns before exempt. A good instance of this occurred in Alexandria in 1887. Dengue began to be noticed in Cairo about the middle of September, but Alexandria had perfect immunity for six weeks till the very end of October, when it broke out in a mild form among the English residents and others. This was a few days after several people had reached Alexandria from Cairo while actually suffering from the fever. Some were incubating; others, feeling feverish, hoped to shake it off by change of air; and a few strong men, disdainful of the disease, took the journey in pursuance of their own work. In 1880, cases of dengue occurred in Malta after the disease had run its course in Cairo and Alexandria. Eight hundred boarders among the children of the Government schools in Cairo afford statistics which are probably typical as regards time of the native population. From Oct. 8th to 13th there were twenty-nine new cases; 14th to 20th, fifty-five; 21st to 27th, sixty-one; 28th to Nov. 3rd, thirty-two; Nov. 4th to 10th, twenty-six; 11th to 17th, thirteen; 18th to 24th, four; 25th to Dec. 2nd, none: a total of 220. The mode of communication of the poison is presumably through the air, and actual contact is not necessary. It is those who have been in close communication with the sick who are likely to suffer, and with free ventilation the disease almost ceases to be infectious. I know of no evidence to show that the poison can be communicated by clothes. The epidemic having taken place in Cairo during the months when many residents and visitors were absent, it seldom happened that any large institution was obliged to close its doors on account of the disease, though for a few weeks a gloom was cast over many hospitable private houses. One public place of entertainment, boasting of fourteen *artistes*, was obliged to close for four days because seven of the performers were ill at one time. All the fourteen suffered from dengue, besides ten musicians, out of a total of twenty-two, and six waiters out of thirteen. None of these individuals lived upon the premises.

Incubation period.—This is said to be four days by most writers. In those of my patients who were attacked immediately after arrival in Cairo from Europe, it varied from two to eight days.

Immunity from subsequent attacks.—At the end of November, 1887, I saw two black patients with dengue pains in their knees, ankles, hips, and muscles, and a temperature above 103° F.; both these men stated that two months before they had suffered from a similar fever, with much worse joint pains, and that all their friends had undergone the same illness at that time. In addition to these two cases, I heard of many others of second attacks during the year. Very many who experienced dengue in 1880 had the disease again in 1887. Of twelve Anglo-Indians who were exposed to an epidemic in India in 1874 and in Cairo in 1887, three suffered in India but not in Egypt, one escaped in India and caught the fever in Egypt, and the remaining eight were unattacked by both epidemics.

Dengue in lower animals.—Dogs, cats, sheep, and cows are said to have been attacked at Cadiz, in India, and in Algiers.[1] In the recent epidemic in Egypt, my veterinary

[1] Nielly: Pathologie Exotique, p. 154. Paris, 1881. Hirsch: Geographical and Historical Pathology, vol. i., p. 78. London, 1883.

friends assure me that no animals were known to suffer from anything like dengue.

Symptoms.—The patient is seized rather suddenly with pain in the head and eyes, muscular stiffness and general fatigue, with nausea and epigastric trouble. The temperature at once rises, with a feeling of chilliness, and remains between 100° and 104° for about four days. The individual is obliged to take to his bed on the second or third day on account of muscle and joint pains, and giddiness and syncope. He complains of acute pain in the head and back, and especially in the muscles of the eyeball. There is a complete loss of appetite, with nausea, slightly coated tongue, and constipation. Either about the third day or after the temperature has become normal, a rash like scarlatina or measles appears upon the face, chest, and arms. This rash may last six days, and be followed by very slight or by very complete desquamation, or the eruption may be present for only a few hours, and may be easily overlooked. Slight soreness of the lymphatic glands and pricking, tingling sensation in the skin are often present. After the sixth day the patient begins to crawl about, but for at least a week longer he suffers from a degree of prostration which seems out of all proportion to the slight fever he has undergone, fleeting pains increased by exertion, loss of appetite, giddiness, and the risk of a relapse. The following is a typical case:—

A young English lady, on Nov. 16th, 1887, was quite well at 1 P.M., and ate luncheon as usual. At 3 P.M. she began to suffer from muscular stiffness in the hips, headache, and great sense of fatigue, with aching of the eyes, which prevented her continuing to read. Temperature 100·8°; pulse 102. At 8 P.M. temperature 101·6°. Nausea and vomiting.—Second day: Temperature in the morning 100·4°, evening 102·4°; pulse 90. General pains.—Third day: Temperature in the morning 100·4°, evening 101·2°; pulse 76. Sleepless night from pain in knees, elbows, and ankles. Throat not sore or red. Aching of eyes. Slight measly eruption on face, arms, and neck.—Fourth day: Temperature in the morning 100·2°, evening 99·2°; pulse 72. Pains now in legs, back, knees, fingers, and all joints. Very marked erythema of face, which is hot and swollen. Has been sweating well after medicine.—Fifth day: Temperature in the morning 99·6°, evening 98·6°; pulse 68. Pain chiefly in lower extremities and in finger joints, which are slightly swollen, so that large gloves become too small. Eyes ache; tongue coated white; nausea continues; measly rash all over face.—Sixth day: Temperature in the morning 99·6°; pulse 63. Temperature in the evening 100°; pulse 72. Can sleep now without draught, but has nightmare dreams. Ribs and back painful. Face still slightly swollen, and measly rash present; complains of the skin itching and pricking. No desquamation. Smarting pain at the back of the eyeballs. Tongue coated.—Seventh day: Temperature in the morning 98°, evening 98·4°. Rash still on face, but not elsewhere. Cervical, submaxillary, and inguinal glands slightly swollen and tender to the touch. Throat looks red, and was sore during two nights, but is not sore now. Backache.—Eighth day: Fleeting neuralgic pains in chest, hands, and feet. Face still patchy with erythema. Slight desquamation of hands.—Ninth day: Slight urticaria on arms and ankles. Pain in fingers, feet, and ribs. Nausea; tongue coated; no appetite.—Tenth day: Kept awake at night by great pain again in back and legs. Eruption quite gone, and branny peeling of face and arms has begun. The patient says the tingling in the skin reminds her of the feeling of scarlatina, which she had seven years ago.—Eleventh day: Fleeting pain in legs, feet, and back. Tongue almost clean. No appetite.—Thirteenth day: Knees painful. Desquamation finished. Feels very weak, and becomes giddy if she walks about the bedroom. The catamenia appeared at the usual time, but were profuse, and lasted eight days instead of five.—Fifteenth day: Pain in the back, but getting stronger.—Twentieth day (Dec. 5th): Still weak, and pain in ribs. Carriage exercise daily. No remission later.

ANALYSIS OF SYMPTOMS.

Physiognomy.—The countenance is flushed so that it gives a man a sunburnt appearance, and it might be thought at first that a woman or child were vividly blushing. But some traces of the flush can be generally discovered on the neck, arms, and upper chest, the whole disappearing before the fever subsides, and often only present on the first day. The conjunctivæ are injected as in mild cases of measles.

Eruption.—In a considerable number of white patients, perhaps one-half, no eruption is seen; this is partly due to its evanescent character and to the very localised extent to which it is sometimes present. A redness at the elbows for only a few hours may easily not be seen at the doctor's visit. There is no fixed time for the appearance or duration of the rash. It may be seen upon the first day, as in the case of a lady who noticed it upon her neck and arms at a dinner party after a rigor, upon the second, third, or fourth day during the fever, or upon the sixth or seventh day, as in my own case, more than twenty-four hours after the temperature has become normal. The character of the eruption is either a general redness like scarlatina upon the face, neck, arms, chest, and perhaps legs and back, disappearing on pressure, and seldom lasting more than one day, or there is a spotted rash like measles, which lasts from two to seven days. This rash, which occurs in perhaps less than one-fourth of the whole cases, is of a dusky pink colour, and consists of small slightly elevated papules, fading for the moment by pressure. Discrete spots coalesce, and the face becomes swollen and uniformly red, until a period of itching and smarting arrives previous to its complete disappearance. I have not been able to satisfy myself as to the existence of an initial and a terminal rash as described by some authors. Possibly this was a peculiar feature in one epidemic, as suggested by Maclean.[1] In some of my patients the measly rash was followed by a little urticaria, and in others, without any interval, by circular rings like very early psoriasis, but without separation of the epidermis. It is hardly necessary to say that in brown and black patients no eruption can be seen. Petechiæ and purpuric spots I never saw.

Desquamation is a symptom of doubtful presence. There is in general a branny furfuraceous peeling of the parts where the eruption has been, but even this may require careful looking for. In other cases, and not necessarily those in which the eruption has been well marked, there is an amount of peeling which is seldom seen except after scarlatina. Great flakes are shed from the hands and feet, and desquamation, with itching of the skin, may continue for a month. This itching, smarting, tingling, as the epidermis changes, is a minor characteristic symptom experienced by nearly all. Women patients complain that during convalescence their hair falls off.

The *temperature* does not rise so high as in most other fevers, and seldom remains above normal for more than six days, sometimes falling as early as the third or fourth day. I have morning and evening records of seventeen English patients during eight days, the thermometer having been placed under the tongue. On the first day the temperature was 101° or 102°, excepting once when it rose to 104°; on the second day 101° to 103·6° in the morning, and 101° to 103·5° in the evening. On the third day it varied from 99° to 102·3° in the morning, and 100·6° to 101·6° in the evening; on the fourth day from 98° to 101° in the morning, and 99·2° to 102·4° in the evening. On the fifth morning four temperatures were below 99°, and only two reached 100·8°; while in the evening they varied from normal to 103·4°. On the sixth morning the highest temperature was 102·4°, and nine were below 99°; while at night there were only two abnormal rises, 100° and 102°. On the seventh day the temperatures varied from 97° to 99°; and lastly, on the eighth day, from 97° to 99·2°. On twenty-four occasions the evening temperature of a patient was lower than his morning record; this was nearly always due to the decline of the fever having commenced upon that day. The temperature after the decline is not markedly subnormal. In rare cases the fever lasts ten or more days, but is then generally complicated by past or present malaria. Slight perspiration often accompanies defervescence.

The *pulse* during the febrile period is almost always under 100, and I have never seen it higher than 102 in the morning and 108 in the evening. Under ordinary circumstances it varies from 63 to 90, and becomes even slower when the temperature first falls. The fact of the pulse not rising with the fever helps to distinguish the disease at the outset.

The *blood* has never been systematically examined in Egypt. An American physician from Texas stated at the International Medical Congress (1887) that he had discovered a dengue bacillus.

Digestive symptoms.—The tongue is, after the first day,

[1] Diseases of Tropical Climates, p. 114. London, 1886.

slightly coated with a white or yellow fur, and usually remains moist throughout the attack. It does not become clean until about a week after the temperature has become normal. The appetite fails suddenly at the onset of the fever, and marks distinctly the beginning of the disease; during the febrile period and for at least a week afterwards there is loathing for food, and it is often a month before the appetite is completely restored. During the period of convalescence smokers have no relish for tobacco, and women complain that they do not like tea and other favourite articles of diet. It is the inability to take solid food, together with a few days of mild fever, which cause the loss of flesh present in all severe cases. During my own attack I lost 7lb. weight in five days, though my temperature was never higher than 102·4°, and I had no vomiting or other bad symptoms. Thin people all emerged from their sick beds looking like ghosts, and fat men for the first time became proud of their figures. Thirst is never excessive. Vomiting occurs very often on the first day, and is occasionally seen during convalescence, when the patient has returned to solid food and the erect posture too early. Pain and tenderness in the epigastrium often accompany vomiting, and may occur without it. The liver may be slightly enlarged in a few cases, but is seldom felt below the ribs. I have examined the spleen carefully in 100 cases, and have never found any real enlargement due to dengue. In two cases of fever I found enlargement, but these proved afterwards to be enteric and hepatic abscess. The bowels are almost invariably constipated during the disease. Jaundice is not present.

The *urine* is increased in quantity on the first day of the fever. In my own cases I only once found temporary albumen, and I believe that this symptom was not very frequent during this epidemic. During the epidemic of 1880 in Alexandria Vernoni[2] found albumen eleven times in fifty-three analyses.

Headache is almost invariably complained of, and is one of the first symptoms, the pain being mostly frontal, but sometimes general. Many patients refer pain to the back of the eyeballs, and are quite unable to read or to bear daylight.

Giddiness often attacks those who strive to remain at their work after the fever has declared itself, or those who try to shorten the period of convalescence.

Muscle and bone pains are always present from the first day to the second week, and compel the patient to take to his bed. Joint pains were often complained of during this epidemic, but were much less universal than in former outbreaks. When joints became painful and swollen, it was generally the hips, knees, ankles, and fingers which were affected, and it seemed that the coloured natives suffered from this more than European patients. Several English ladies I found were unable to wear their ordinary gloves in consequence of the swelling of the finger joints. The muscles of the whole body are at first affected by a general sense of fatigue, after that certain muscles such as those of the back, neck, and lower extremities, are attacked by excruciating pains, increased by pressure or movement, and not at all unlike acute rheumatism. The pain becomes the prominent feature of the disease, and is remembered longest by the patient after recovery. When the pain settles down locally into any muscles, it resembles a perpetual cramp, so that the sufferer is afraid to move in his bed by day, and cannot sleep without sedatives at night. The pain does not disappear with the fever, and often lasts in a neuralgic form for three or four weeks.

Delirium is an occasional symptom, limited to the intemperate and hysterical, but many patients complain of troubled sleep and frightful nightmare. Sleeplessness is generally due to muscular pain. Convulsions are only seen early in the fever in children, who suffer much less than adults from pain and other symptoms, and remain feverish for only about three days.

Epistaxis occurred often among the natives early in the epidemic, and in 5 per cent. of my patients. It appeared during the first five days, and seemed to relieve the headache.

The *throat* during this epidemic was complained of by less than one-fourth of the patients, and when examined was found to be red and erythematous, without great swelling or ulceration of the tonsils. Many other patients' throats were found to be red and angry-looking, though they suffered no inconvenience from them. In two cases the throat symptoms seemed more important to the patient than the pains or rash; but as a rule the throat was casually mentioned upon the first day and remained only a little sore for three or four days. I saw no enlargement of the submaxillary glands or indurated swelling of the neck and connective tissue such as occurs in some cases of scarlatina.

Menstruation occurred during the febrile period in most of my women patients, and was always profuse. The period arrived one or two weeks earlier than usual in women invariably regular in their epochs. I saw no case of dengue in a pregnant woman.

Swelling of lymphatic glands, such as cervical, submaxillary and inguinal, was a minor symptom only noticed in delicate patients from the fifth to the seventh day of the disease. This observation is in marked contrast to at least one epidemic in India, where patients' faces become distorted as in mumps.

Orchitis occurred in very few cases in Cairo, and was reported in only one case from Port Said.

Diagnosis.—The diseases with which dengue is liable to be confounded are rheumatism, scarlatina, malaria, and simple continued fever. Rheumatism is, of course, suggested by swollen painful joints in a fevered patient; but in dengue it will be found that the muscles and bones are also affected, and the rash, if carefully looked for, will confirm the diagnosis. The history of the invasion and the absence of acid sweats will be noted. Acute rheumatism is very rare in Egypt. Scarlatina[3] can only be excluded from the diagnosis with some difficulty, though the presence of one disease in an epidemic form is generally an aid. In both there are fever, sore-throat, rash, desquamation, and possible albuminuria. Vomiting may occur at the onset of either disease. The *early* appearance of severe pains in head, eyeballs, and muscles occurs in dengue and not in scarlatina, while it is rare in the former disease to hear the throat especially complained of. The dengue temperature is very like that of scarlatina, except that its decline is more sudden, and it is commonly associated throughout with a slower rate of pulse. The throat eruption and peeling of the skin are like very mild cases of scarlatina, and never resemble severe cases. Malarial fevers are unattended by rash, and are neither contagious nor epidemic. Though malarial poison is quite capable of producing a similar continued fever, dengue is not apparently influenced by antimalarial remedies, and is not accompanied by pain or enlargement in the spleen. Intermittent fever, though not common in Cairo, is, however, generally present in the autumn to a slight degree. Simple continued fever, unlike the other diseases, is common in Egypt, and is never absent from the army hospitals. The apparent contagiousness and the eruption of dengue will distinguish it, though in other respects the two diseases are often perfectly similar. The percentages of admissions of simple continued fever

[2] Paper read before the Royal Academy of Medicine and Surgery at Naples in 1881.

[3] During the epidemic of dengue in Cairo in 1887 some sixty cases of scarlatina were admitted into the English Military Hospital, all suffering from fever, sore-throat, and erythematous rash. About a dozen of these cases were followed by extensive desquamation lasting between three and six weeks, and appeared to be as typical cases of scarlatina as could be seen in London. When I was first permitted to see them by my courteous military colleagues, I unhesitatingly believed in the diagnosis, and was followed in this respect a few days later by a hospital physician from London accustomed to deal constantly with scarlatina patients. The army medical officers are of course perfectly competent to decide upon the question of scarlatina, and are, moreover, great authorities upon dengue, for some of them had served through more than one dengue epidemic in India. They invariably stated that this disease was not to be compared in severity or in joint pains with dengue as seen by them in India. In the face of this it seems presumptuous to criticise the diagnosis, but the following points are deserving of mention: The scarlatina admissions were synchronous with the dengue epidemic in Cairo. Scarlatina is a very rare disease in Egypt, and no cases were reported at the time either among the native population or among the English women and children, including those of the soldiers. None of the patients had œdematous ulcerated throats, brawny swelling of lymphatic glands, or any serious symptoms. The case which seemed to be most typical of scarlatina was that of a young man, who is known to have had that disease a year previously. In at least two of the cases where desquamation was thought to be over, a further peeling of what seemed healthy cuticle occurred, and in these every symptom of mild scarlatina had been observed. It should be stated also that none of the scarlatina cases had swellings or definite pains in their joints, though some had had transient pains in muscles and joints not at all incompatible with the invasion period of scarlatina. Of the sixty admissions, only two had albumen in the urine, in each case for a very short time, while a third patient had abscesses in both axillæ during convalescence. Lastly, there have been no cases of scarlatina either among the British troops or in the rest of Egypt during the five months which have elapsed since the dengue epidemic.

from the British troops in Cairo were not dissimilar during the months of 1886 and 1887 until October, when they rose from 1·7 to 7 per cent. In November, 1886, the percentage was 1 per cent., and 6·4 in 1887; while in December, when the dengue epidemic was over, they were respectively 0·3 and 1 per cent. Possibly some of these cases in October and November were mild examples of dengue, in which the rash was absent or undiscovered. In Alexandria, where the epidemic was milder and of shorter duration, there was no perceptible difference between the simple continued fever admissions from the British troops in 1886 and 1887.

Varieties.—Dengue would seem to present varieties according to its degree of severity and the presence of certain symptoms or complications, such as persistent pain in particular joints, swelling of submaxillary glands, epistaxis, relapses, and the initial and terminal eruptions as seen in Calcutta in 1872. The chief features of the 1887 epidemic were the mildness and short duration of the symptoms, and the comparative absence of painand swelling in the joints.

Sequelæ.—There are in Egypt no complications of dengue, but the convalescence is curiously protracted, so that it may be weeks before the patient is able to resume all his ordinary occupations in consequence of his anæmia, debility, loss of flesh, and muscular pains. Vernoni in 1881 suggested that after the epidemic of 1880 there were an unusual number of cases of inflammation and abscess of the liver, but this is not the experience of the present year. I have met with three cases of enteric fever, contracted while still feeble from an attack of dengue.

Prognosis and mortality.—With the exception of one case of malignant dengue at Port Said in 1883, I know of no fatal results in Egypt. One patient died of angina pectoris at the end of his convalescent period; but at Aden in 1871 a mortality of 5 out of 450 cases is reported by Nielly.

Treatment.—Quinine is apparently of no prophylactic value, and, as already stated, those who returned from Europe in perfect health were affected as easily as those who were exhausted by the damp heat of an unusually trying summer. There is no need for drug treatment in most cases. An emetic early in the attack seems to lower the temperature and benefit the malaise, and the bowels generally require to be gently purged. Quinine is of no avail to shorten the disease, but is useful as a general tonic when the tongue has cleaned during convalescence. Arsenic and other antimalarial drugs are also useless. Antipyrin and antifebrin in large doses will lower the temperature and the patient, but will not assuage pain or cut short the disease. Belladonna, recommended by one author for pain, I never found of any use. Salicylate of soda in doses of twenty grains seemed more useful for pain than other drugs. Chloral and bromide of potassium were used as sleeping draughts in bad cases. Tonics for the appetite and iron for anæmia are necessary for about a month during convalescence. Muscular rheumatism, when it persists, is benefited by antipyrin. During the febrile period, and for at least a fortnight afterwards, the patient will be unable to take solid food in any quantity, and will of course require nourishing liquids and a little wine.

Cairo.

A NEW FORM OF

INSTRUMENT FOR THE TREATMENT OF INFANTILE PARALYSIS INVOLVING THE EXTENSOR MUSCLES OF THE KNEE.

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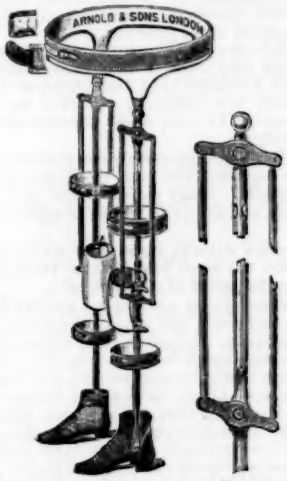
THERE is a class of cases, well known to those interested in orthopædic surgery, in which, in connexion with infantile paralysis of some or all of the muscles of the leg and foot, there is also paralysis of the quadriceps extensor muscle of the thigh, and hence, in consequence of want of power to extend the knee and hold it rigid during progression, inability to stand or walk on the affected limb. Where the paralysis of the muscles below the knee is at all extensive, there may be no distortion of the foot, the lower part of the limb being flail-like and useless; where the paralysis is less extensive, the foot may be drawn into some abnormal position by the shortening of the muscles antagonistic to those paralysed. In either case the patient may be quite unable to stand or walk without some form of artificial support. Or the want of power in the muscle to extend the knee has, in some cases I have seen, been compensated for by the patient placing his hand upon the lower part of the thigh, and thus forcing the knee more or less into the extended position. This manœuvre, however, necessitates a bending forward and lateral deflection of the body and the consequent assumption of a very unsightly gait, and at times of serious curvature of the spine. The usual way of dealing with these cases is to carry double leg-irons to a calf circlet below the knee, and to continue the outer iron above the knee to a pelvic girdle, leaving a free joint at the hip, and providing the joint at the knee with a ring catch or flute-key catch. When the anterior muscles of the leg are paralysed, a toe-raising spring of some kind is also frequently employed to act on the ankle joint. By the use of the ring or flute-key catch the joint at the knee can be fixed with the limb in the extended position, thus allowing the patient, other things being equal, to stand and walk on the paralysed limb. When it is desired to flex the knee, as in sitting down or ascending or descending stairs, the ring or flute-key catch is loosened, and, the joint at the knee being no longer fixed, the leg falls into a flexed position by its own weight. Before



resuming the upright attitude, it is of course necessary to fix the knee joint again, with the leg in full extension, in order that the affected limb may form a rigid support to transmit the weight to the ground. Now, as the extensor muscles of the leg are paralysed, this is done either by pressing the knee back with the hand on the lower third of the thigh, whilst the heel resting on the ground forms a fixed point; or by lifting the leg with the opposite foot placed behind the ankle into a line with the thigh. Then as soon as the leg is in the extended position the joint at the knee is fixed by the ring or flute-key catch. These catches, which are worked beneath the trousers or dress, are a little difficult to manage, as the leg must be fully extended before the catch can be made to fix the joint at the knee, and are consequently especially awkward to manipulate when they have been loosened for the purpose of allowing the leg to be flexed while ascending or descending the stairs. Further, as soon as the ring catch is loosened, all voluntary control over the leg is of course lost.

Whilst considering whether something more might not be done for the relief of these cases, it occurred to me that the muscles moving the hip joint might, by a simple arrangement of levers, be made to supply the place of the paralysed extensors of the leg, and that the movements of the hip might thus be made to control, to some extent, the movements of the knee. On sitting down, the thigh is normally flexed to more or less of a right angle; whilst, in ascending or descending stairs, flexion of the hip and

knee, but of course to a less extent (unless the step measures in depth the length of the leg when both are also flexed at a right angle), also takes place. The instrument figured in the annexed woodcut was made by Messrs. Arnold from a rough model I supplied them for the purpose. It is so contrived that when the hip is either flexed or extended by means of its flexor or extensor muscles, the knee, by means of the side levers (showed enlarged on the right of the figure), is also flexed or extended to a like degree. Hence, when the patient sits down, and consequently flexes his hip, the knee, by means of the levers, also becomes flexed to the same angle as the hip; and, again, in rising from the sitting posture, as the hip is straightened, so, by the same means, is the knee. As long as the hip is kept extended the joint at the knee is rendered fixed, and a rigid limb is thus provided for supporting the body. In walking, however, during the pendulum-like movement of the limb as it swings forward, while the opposite limb is on the ground, the knee should not entirely follow the movement of the hip. To allow for this a double stop-joint is further provided at the hip, permitting flexion and extension of the hip to take place to several degrees before the levers which act upon the knee are brought into action. At first it may be necessary, whilst the hip muscles are gaining power, to fix the knees completely by means of a screw nut. The instrument shown in the woodcut sufficiently explains itself, and any minute account of the mechanism seems hardly necessary. It was made for a little girl who was sent to me in the orthopædic department with complete paralysis of the extensors and flexors of the knee on both sides, and with more or less paralysis of the left arm. She had never been able to stand on her feet, but managed to get about by walking on her flexed knees. At the present time she can walk on her feet when aided by someone taking hold of her unparalysed hand. (July 23rd: Since this was written, she can now walk alone with only one knee fixed by the screw nut.)

Weymouth-street, W.

SOME FURTHER NOTES ON THE

ETIOLOGY OF ULCERATIVE STOMATITIS OR CANCRUM ORIS.

By ALFRED LINGARD, M.R.C.S.,
DIPLOMA IN PUBLIC HEALTH, CAMBRIDGE.

IN a previous communication I have described the occurrence of what appeared to me to be the same disease in the human subject, monkeys, and calves. The disease which I described previously affects the tongue and cheek, and secondarily the lungs, both in human subjects and in animals. A form of gangrenous pneumonia, apparently produced by similar micro-organisms, has also been observed by me in the lungs of five horses. Portions of the affected tissues inoculated in calves produced a disease resembling noma in all respects. The essential characters of the micro-organisms in all cases were similar. They consisted of long thread-like growths, the individual threads being made up of small bacilli varying in length from 0·004 mm. or less, to 0·008 mm. or more, and about 0·001 mm. in thickness. These organisms were found in great numbers at the line of extension of the necrotic patch. Cultivations have been made from five cases in the human being, in one case in a monkey, in two cases in young pigs, in numerous cases in calves, and in the lungs of horses. It was then demonstrated that the inoculated disease is characterised by appearances precisely similar to those seen in the original disease. I wish here simply to enumerate the lesions found in the heart at death in the human subject, and in animals inoculated from other animals of different species, suffering from ulcerative stomatitis or noma. The most serious conditions are those presented by rabbits after inoculation in the ear with the affected tissues from the young pig and calf. These animals die on the tenth or eleventh day after inoculation. The ear is found to be very much increased in size from the inflammatory process, and has been found to weigh fifty-one grammes when the healthy ear only weighed twelve. As in the two cases some differences were observed at the necropsy, I will give a short account of the condition of the pericardium and heart in each.

CASE 1. *Rabbit inoculated from the affected tissue of the pig.*—On slitting up the pericardium the heart was found to be enveloped by a thick, pale-coloured false membrane one-eighth of an inch in thickness, which on microscopical examination was discovered to be composed of long bacillar threads matted together. Under this membrane in the muscular substance of the heart were found yellow necrotic patches, the largest was seven-eighths of an inch in length by three-quarters of an inch in breadth, forming the apex of the heart. On section this necrosis was proved to involve the whole thickness of the left ventricular wall. The left coronary artery was distended, and gave the impression to the touch of a thick and hard piece of cord. The lungs and liver were similarly affected.

CASE 2. *Rabbit inoculated from the affected tissues of the calf.*—The pericardium contained little or no fluid, but a membrane covered the surface of the heart about one-twelfth of an inch in thickness, which on microscopical examination was proved to be formed of fibrin, while numerous cells were entangled in its meshes containing large numbers of granules, also very numerous ammonio-magnesian phosphate and oxalate crystals. On removal of the membrane from the surface of the heart, several masses of yellow necrotic tissue became visible, involving the muscular structure of the apex of the left ventricle; and others were found, smaller in extent, over the upper portion of the left ventricle anteriorly and posteriorly. On section, as in the previous case, the necrosis was found to involve the whole thickness of the muscular wall, and so extend into the interior of the left ventricle. After hardening these tissues in Müller's fluid, different portions were submitted to microscopical examination. It was then found that, as in the case of the mouth[1] so in the heart substance, the necrotic process was coextensive with the advance of a mass of bacilli.

On section of the muscular wall of the heart some small necrotic foci were observed, but there were many that could not be recognised macroscopically. These small foci, when examined with a power of 200 diameters, are found to be circular in shape. In the centre of the patch are a large number of thread-like organisms, which have rapidly increased, probably, from one or two deposited there in the first instance. Neither structure nor nuclei were to be observed in this area, owing to the nourishment having been abstracted at the expense of the cells as the bacilli gradually invaded the healthy tissue. Just outside the principal zone of bacilli there were stray or single ones between the muscle fibres, and in this situation were a few leucocytes dotted about, while still more externally was seen an extensive zone of leucocytes surrounding the patch, which was evidently due to the inflammatory process which had started there. In many places I found these organisms in varying numbers infiltrating the intermuscular tissue and surrounding the capillaries and lymphatics. In these cases they appear like long bundles or leashes of circular contour passing along the lumen of the vessel. I also found various collections of leucocytes in the intermuscular spaces, in groups varying in size according as they contained only a number which could be counted, or as they contained so many as to make it impossible to number them. I always found one or more elements of the threads, either well-formed bacilli or round dots, which were obviously spores. In the coronary arteries and their smaller branches supplying the cardiac structures I came across vessels of different calibre, the walls of which were more or less infiltrated by bacilli. In the larger the lumen of the vessel was occupied by a granular substance which did not stain, evidently the remains of a blood-clot. In the centre of this clot were seen knotted skeins of threads, which readily absorbed the aniline dye. There were also seen solitary bacilli, as well as groups of the specific bacilli, in different parts of the clot in immediate contact with the intima of the vessel. The intima and elastic laminæ were not invaded by these organisms; but all the rest of the arterial coat was destroyed, and consequently all definite structure lost, its place being entirely occupied by myriads of wavy threads.

In the human heart, in consequence of the early death of the patient, such serious lesions are not met with. In the five necropsies I have made on children dying of noma I have only once found heart lesion, and that was characterised by the presence of petechial spots, about from ten to twelve in number, of a dark-red colour, dotted over the surface of

[1] THE LANCET, May, 1883; and Micro-organisms and Disease, by E. Klein M.D., F.R.S.

the heart immediately beneath the exocardium. On closer examination these spots were found to be slightly elevated above the surrounding tissue. Microscopically, these petechial elevations presented a small hæmorrhage raising up the exocardium, whilst the apposed portion of the muscular bundles of the heart was surrounded by a varying number of blood-corpuscles. On very careful examination I was able to verify the presence of organisms—always micrococci or diplococci,—which had gained entrance to the circulatory system from the grumous material always found in the cavity of the mouth &c. in such cases. In no instance was I able to discover the thread-like growth or bacillus noma.

Although I have not yet completed my investigations of cancrum oris in the human subject and the above-mentioned animals, the facts I have detailed justify me in publishing them as far as they go. We should hardly expect an animal to live with necrotic areas of tissue in the substance of the heart; that it can do so is a new and startling fact in the history of pathology. We should have been prepared to find the necrosed portion give way, and death ensuing rapidly.

This is the only organism yet described that appears to be purely and simply a tissue destroyer, invading and reproducing itself in its course over healthy areas, and leaving nothing in its wake but a mere skeleton of what previously existed. The tissue thus invaded is sucked dry as it were, the organisms in contact with the necrotic parts in like manner undergoing similar changes, their centrifugal advance depending upon fresh formation at their periphery. As in the case of a fly sucked by a spider, the fly is dead, but its outward visible form is present, and capable of easy recognition, though the protoplasmic elements entering into its composition have been deprived of their vitality by the process. The fly is present, but at the expense of its attributes. So in the case of the tissue changes observed in animals. We are able to distinguish muscle fibres, but *minus* their striæ, areolar tissue, fibrous tissue, and the several coats of vessels, though the outline of the special elements entering into their composition is wanting, the elastic lamina, however, remaining intact. All are present in a more or less perfect condition, yet sapped to their vitals by the devastating horde invading their territory. That the small veins and capillaries are seriously affected by the immediate presence of these organisms is evidenced by the inflammatory changes noted—changes induced to stem the tide and offer a barrier to impending invasion, but all in vain. The occurrence of ammoniomagnesian phosphate and oxalate crystals in the pericardial false membrane is unique, and possibly accounted for by the fact that these crystals are always found when pure cultivations of these organisms are made in fluid media.

I hope, in a future communication, to illustrate all the morbid conditions described above by drawings which I have had carefully prepared at intervals during the past five years, as well as to show cultivations illustrating the *materies morbi* in each animal.

Lambeth-palace-road, S.E.

A CASE OF

FATAL HÆMORRHAGE ASSOCIATED WITH JAUNDICE IN A CHILD SEVEN DAYS OLD;

WITH REMARKS ON THE PROBABLE CAUSES OF ICTERUS NEONATORUM AND HÆMOPHILIA IN THE NEWLY BORN.

BY G. STEEL SCOTT, M.B., C.M. GLAS.

IN the early part of last March I attended Mrs. C——, wife of a millowner near Halifax, during her second confinement. On making an examination I found that the breech presented. Labour was very rapid and easy, and no complication of any kind occurred, the mother making a rapid recovery. The infant, a male, seemed healthy, and was well developed. The first child, a female, is still living, and has never been under a doctor's care. However, on the evening of the fourth day I received an urgent message requesting me to see the newly-born child as soon as possible, as the stump of the cord had just separated, and the blood, which was oozing profusely from the umbilicus, could not be stopped by the nurse. I hastily put some lint, plaster, tincture of perchloride of iron, &c., into my pocket, and accompanied the messenger on his way back. At first sight the child looked as if nothing ailed it, but on the nurse removing the clothes &c. in which it was enveloped, it was apparent that considerable hæmorrhage had taken place. On questioning the nurse, I could not discover that there had been any premonitory symptoms, excepting the fact that up till that morning the child was one of the quietest she had ever nursed. During the day it became restless and cried a good deal, but readily took milk from the spoon, and dark motions had been passed regularly from birth. The child so far presented no symptoms of jaundice beyond the usual icterus after birth. When it was completely stripped of clothing, it became evident that the umbilicus was not the only source of hæmorrhage. A large, dark, roundish, slightly elevated ecchymosis, about two inches in diameter covered the prominence of each shoulder. They seemed quite tense to the touch, as if the effusion of blood into the subcutaneous tissue had been considerable. Smaller patches appeared over each of the spinous processes and the ilium, while broad stripes of discolouration were spread over the ribs as if the simple pressure of the binder or nurse's fingers had been quite sufficient to cause rupture of the brittle capillaries. I applied some lint soaked in the perchloride of iron to the umbilicus, which of course was somewhat open, strapping it firmly over with adhesive plaster, and at the same time ordered the child to be placed in a cool room and the bony prominences and ecchymoses to be protected by pads of wool. On the following day the infant seemed considerably worse; it looked more shrunken and pinched, and was decidedly jaundiced. The yellowness of the conjunctivæ was well marked, though not severe. During the night the child passed a dark motion; the dark colour might have been due to internal hæmorrhage or meconium, or the very small but frequently repeated doses of the perchloride of iron tincture which I had ordered to be given during the night. The loss of blood from the umbilicus had ceased for a while, but at the time of my visit (about 10 A.M.) it was oozing freely. I removed all the dressings, dried blood, &c., and to the bleeding floor of the umbilicus I applied the tip of a piece of caustic. This application had the effect of checking the flow for a few hours, but it came on again, as I learned on the following day. Then the infant looked very pinched and shrivelled indeed. The jaundice was more intense than on the previous day, and a very small quantity of urine passed in the morning had stained the linen. The child seemed rapidly dying from sheer exhaustion, and the feeble wail it gave forth from time to time plainly indicated that the end was not far distant. On the following morning death took place.

I consider this case interesting, not only on account of the rarity of the disease, but also, after the most careful inquiries, because of the absence of all the usual recognised causes. Neither of the grandparents had ever heard of any of their relatives being affected with a similar disease. Both parents are healthy, stout, plethoric persons, and their first child has always enjoyed excellent health. There is no history of syphilis or previous miscarriage; careful examination of the husband verifies this fact. His father, however, has suffered for many years from an intractable form of skin disease, for which he has consulted many eminent specialists, living and dead, among them Erasmus Wilson, who called it chronic eczema. This is the only suspicious point in the family history. The infant did not suffer at any time during its short existence from any affection of the umbilicus of an inflammatory nature, though cases of such have been described, associated with phlebitis, pyæmia, peritonitis, &c. Besides, from the fact that the child passed abundance of meconium, even during labour (being a breech presentation), I may safely conclude that the common bile duct was intact; though cases of fatal jaundice have been reported to have occurred in children in whom a congenital defect of this structure has been discovered, arising probably from syphilitic perihepatitis (Dr. Finlayson). Seeing there is no discoverable external cause for the disease, our attention is naturally turned towards the child itself. Such cases are said to arise *de novo;* but as this explanation throws no light on the causes &c. of the affection, we are still confronted with the query—What is the pathology of hæmophilia of newly-born infants arising *de novo?* So far as I am aware, this has never been satisfactorily described; and, in consideration of the above facts, I venture to advance a theory in the following very brief remarks which will perhaps explain the nature of the affection, and a closely allied though harmless and evanescent one—icterus neonatorum.

In utero the umbilical veins carry the blood from the placenta through the umbilicus of the fœtus, part of which joining that in the portal veins enters the liver, the remainder entering the vena cava ascendens. When the placenta is separated from the womb during labour, or when the cord is suddenly tied soon afterwards, this circulation must stop. This condition must lead to the production of a certain amount of passive congestion in the liver, which will also be reflected backwards towards the portal vein. But the outward flow of blood from the child towards the placenta being interrupted as well, a temporary, and of necessity very slight, slowing in the general circulation may be expected. But only a few seconds previous to the tying of the cord other and more important changes begin to take place in the infant's circulation, simultaneous with its first inspiration. In utero the plan of circulation is that of the higher reptiles; now there is going on a change towards that of the mammalia. This transformation is never instantaneously complete, but must of necessity be gradual, and may probably extend in duration from moments to months in different individuals. So we may safely conclude that in every case for the first few minutes there is a double kind of circulation in the heart, partly through the four chambers, as in the adult, and partly through the foramen ovale, ductus arteriosus, &c., the Eustachian valve also likely acting imperfectly. The effect of this "setting-to-right" process in the heart on the general circulation will be evident. A feeble circulation must occur, which will be more marked in parts removed from the heart. This is how I account for the blue, cold extremities observable in infants during the first few hours, and very different from the bright rosy hue seen on the subsequent visits. The coldness of the hands and feet may be accounted for by exposure at the time and evaporation of moisture from the body, but I have noticed it in rooms heated up to an almost unbearable extent, and can only attribute the extremely low temperature to enfeebled circulation. Considering the tortuous course of the blood supply to the liver, and the innumerable ramifications and subdivisions of the bloodvessels in its substance, there also must a passive congestion take place, and which will in no way be diminished by the separation of the placenta or tying of the cord already noticed. In proportion to the strength of the child, the capacity of the inspirations, &c., the passive congestion of the liver will be mild or severe, long or short in duration; but in the majority of cases, though unattended with danger, it is severe enough to lead to an excess of biliary colouring matter in the blood and its appearance on the skin and sclerotic. This phenomenon we term "icterus neonatorum." In the natural course of things the hears recovers from its confusion of currents, and a healthy circulation is speedily established. The passive congestion disappears, and so also the icterus which resulted from it. In a weakly infant the congestion in the liver will be more marked and prolonged—a fact which corresponds to the observations of every midwife, that icterus is deeper in puny children than in the robust. Thus we see the same symptoms arise here that we would expect in an adult suffering from congestion of the hepatic organ, and the fretfulness and irritability often noticed for the first few days in the child may be due to this cause.

If my theory be correct, then icterus neonatorum is the result of a pathological process, and not merely a spurious jaundice, or a mere discolouration of the skin, or due to the activity of the skin to get rid of the surplus of bile in the blood &c., as various writers have held. The older authors, who maintained that it indicated a serious pathological condition, though exaggerating the dangers, came much nearer the true state of matters. But even they were not very far wrong in attributing dangers to the usually evanescent and simple phenomenon; for, to my mind, those cases in which an apparently healthy child, without any other known cause, will within a few days of birth be seized with a fatal hæmorrhage associated with jaundice, are merely instances of exaggerated and hopeless forms of the same pathological process. It is easy to understand how, in such a case, when the passive congestion has once developed, if the heart fails from any cause to respond to the demand, complete stasis of the blood will occur, followed by paralysis of function and more or less complete disorganisation of the liver substance. Bile and waste products will accumulate in the blood, the delicate walls of the capillaries throughout the body will be impaired, and effusions of blood take place under the skin, mucous membrane, &c., till the child sooner or later dies of exhaustion. This appears to me to be the morbid history of the case I have described, but being a general practitioner, and having to consult the feelings of my patients, I was unable to verify my statements by a post-mortem examination. To my mind, also, it seems possible for the liver to be the primary seat of affection in those cases of hæmophilia in which no trace of jaundice occurs.

Bury, Lancashire.

A CASE OF PAROXYSMAL HÆMATINURIA, WITH FUNCTIONAL ALBUMINURIA.

BY AMBROSE E. L. CHARPENTIER, M.B.

A. B——, aged thirty-five, married, sent for me to see him on Feb. 15th, 1887. He was said to be suffering from the effects of a cold. I saw him, and elicited the following particulars. His father died of apoplexy, and his mother of kidney disease. Two of his sisters died of phthisis. One brother and one sister are alive and well. The patient has had the usual infectious diseases of childhood, but up to the present has not had any serious illness, though never having very good health. For the first twelve years of his life he lived in a damp and low-lying part of Oxfordshire; since then he has lived in London near the Thames until four years ago. He has never had ague or any intermittent fever. Four years ago he became very thin, and suffered from cough and dyspepsia; he was consequently advised to leave the neighbourhood of London. He now (1887) resides in a damp and cold part of Middlesex. Within a quarter of a mile of his house are three streams and some acres of marsh land, which latter are in winter quite submerged. He has taken a great deal of out-door exercise, playing cricket and lawn tennis, and frequently taking long walks. He has always been moderate in the use of stimulants, but has generally eaten heartily. Two years and a half ago the patient went out, when he got wet and was chilled. On reaching home he had some hot drink and went to bed. On the following morning he suffered from much pain in the loins and thighs, and passed thick porter-coloured urine. He had a day's rest, and on the symptoms abating resumed his employment as usual. Since then he has had a similar attack whenever he has had a chill. A few months ago he was anxious to assure his life (he having been refused once before), and was examined by the local referee for the company, who was inclined to accept his life; he was, however, rejected on the ground that the former examiner had reported the presence of albuminuria. This led to a more thorough examination, which showed that albumen was present only after meals.

On the evening of Feb. 14th the man received a chill. I saw him on the 15th and found him very thin and anæmic, with a yellowish colour of skin. He complained of great pain in the loins and of feeling very cold. He had passed urine of a dark-brown colour and very thick. The loins were tender on pressure. The lungs and heart were apparently healthy. Pulse 100, compressible. The urine, on standing, separated into two layers, the upper being clear and brown in colour, the lower being thick and almost black; specific gravity 1030; acid; about one-tenth albumen; large quantity of urates and phosphates; loaded with urea. Nitric acid in excess produced a solid mass of crystals in the test tube. The guaiacum test gave the blue reaction. Under the microscope, mucus, granular débris, epithelial cells, crystals of phosphates, and a few blood-corpuscles were seen. The patient was ordered light non-nitrogenous diet, with warm drinks and a stimulant once a day; a mixture of quinine and digitalis every four hours; cream or glycerine after each meal; and one of the digestive ferments with all food to aid the digestion.

Feb. 18th.—Patient has no pain. Urine in the morning contains blood; cloudy; not high coloured; sp. gr. 1024; no excess of phosphates; no albumen. After dinner: Urine contains albumen as before; nitrate of urea (by HNO_3) one-third volume of urine. Ordered iron, quinine, and arsenic three times a day; diet to be non-nitrogenous; to clothe warmly and to remove to a warmer part of the country. Neither lying in bed, exercise, nor cold bathing made any difference to the albuminuria.

In the month of May the patient removed to the south coast. The urine after meals still showed about one-twelfth

volume of albumen, but it was not high-coloured or cloudy. In August, after light dinner with digestive ferment, the urine contained no albumen, but after a similar meal without the ferment albumen was found to be present as usual. This was repeated, and showed only a trace of albumen with the ferment; usual amount (one-twelfth volume) without. The urine was pale, and there was no excess of urea. The man was gaining in weight, and was taking cod-liver oil. In May of the present year the patient was still increasing in weight, and the albumen had been gradually lessening. He had no constitutional sign of kidney disease. The urine after dinner, without artificial ferment, was clear and light-coloured; it required careful testing to show any trace of albumen. The man was advised to continue taking tonics, and to carefully diet himself.

Remarks.—This case shows several points of great interest bearing on the important subject of albuminuria. Firstly, as to nomenclature: Although the foregoing is a typical case of functional albuminuria, as described by Dr. S. Mackenzie, Dr. Pavy, Dr. Ralfe, Dr. Johnson, and others, yet, taken in connexion with the hæmatinuria and general bad health, it most certainly cannot be termed "physiological." In this instance, indeed, "post-cibal albuminuria" would be a more appropriate term. Dr. Ralfe could hardly have found a case more suited to illustrate his theory as to this disease, with the important exception that between the paroxysms the urine has not contained an excess of urinary pigment. As to the cause: In this instance we have an *embarras de richesses*. The family history was found to be bad; the previous history of the patient was unsatisfactory from a gastric and renal point of view; and lastly, in accordance with Dr. Dickinson's theory as to the etiology of the hæmatinuria, the patient had for many years lived in cold, damp, and low-lying districts. The course of the paroxysms and the state of the urine are typical, but the progress of the case has been most satisfactory, though it is uncertain whether the credit should be given to the warmer climate, the diet, or the drugs. Another interesting point is the apparent influence of the artificial ferment on the albuminuria. One case affords but small data for generalisations, but this seems to open up a field, at all events, for further experiments. It is known that an excessive meal of eggs will produce albuminuria, as the ingestion of a large quantity of sugar will produce glycosuria. Similarly, some chemical substances will cause glycosuria, and others albuminuria. The two conditions bear a close analogy, which, however, requires further working out. They both are in some degree equally connected with the vaso-motor system, and each is connected with a separate function of the liver. So, as there are cases of functional albuminuria, there are also cases of glycosuria without any perceptible organic change. In the former case the hæmolytic action is excessive, while in the latter the glycogenic function is increased. With regard to the albuminuria: Can it be that, by the combined action of cold and a possible malarial factor, a poison is produced in the blood, which may either aid in disintegrating the corpuscles, as other malarial poisons do, or irritate the vaso-motor centre, or do both, and thus produce a paroxysm of hæmatinuria? Does this act in a similar manner, but to a lesser degree, during the intervals producing the albuminuria, or is a more diffusible form of albumen formed by the dyspepsia, of which almost all these patients complain? As to treatment, that suggested by Dr. Ralfe appears effective; but, in addition, I would suggest the use of one or other of the concentrated digestive ferments.

Uxbridge.

ARBROATH INFIRMARY.—The forty-fourth report was submitted to a meeting of the subscribers held on the 16th inst., the president of the institution (Mr. James Muir) in the chair. It appears the infirmary has been kept in a high state of efficiency, and the financial condition was satisfactory. One hundred and sixty-one patients were treated during the year, with only eleven deaths. Including the balance from last year, the ordinary increase amounted to £1007 14s. 10*d.*, and the expenditure to £819 16s. 6*d.*, leaving in hand £187 18s. 4*d.* A legacy of £100 had been added to the endowment, which now amounted to £9836 9s. 10*d.*, exclusive of the Panmure annuity of £50. At the commencement of the year a change in the medical department had been introduced; four attending surgeons were appointed instead of two, each serving for six months.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF STRANGULATED ENTERO-EPIPLOCELE.

By OWEN BOWEN, M.R.C.S.

JOHN S——, aged fifty, had always enjoyed good health, but for the last six years he had had a lump, measuring 3 in. by 2 in., in his right groin, of which he took no notice—that is to say, he never sought medical advice about it, or wore a truss. Occasionally he had been troubled during this period with slight attacks of biliousness and epigastric pain, and had observed that at these times the lump would get somewhat larger and harder. He did not think it had anything to do with the bilious attacks, but attributed them to "wind," and treated himself invariably with a largely advertised nostrum, in which he has, or had, great faith. On the evening of Dec. 12th, 1887, he was suddenly seized with pain of a griping character in the epigastric region, soon followed by vomiting. Both symptoms he again attributed to wind, and consequently swallowed five of the pills, but they were soon rejected. During the night he was able to keep nothing down. The following morning he took two more of the pills, and subsequently some Epsom salts, but, as he said, failed to effect a passage. Being headstrong, he would not consent to seeing a medical man, and so he went on till the evening of the 16th, when his brother insisted upon my friend, Dr. J. F. Gordon of Maghull, being called to see him. The patient by this time was worn and visibly emaciated, and complained of the constant sickness and of paroxysmal pain in the epigastrium and round the umbilicus. His pulse was not much quicker than normal—about 80. Dr. Gordon examined the usual hernial sites, and discovered the lump in the right groin, but upon being told that it had existed for six years, his first impression that this was the sole cause of the man's illness was to some extent shaken, and he resorted to stomachic sedatives and morphia, with outward applications over the abdomen of a soothing character, there being no impulse on coughing or pain on manipulation. On the 17th the patient's condition was much the same, the vomiting still persisting, though a little weak brandy-and-water was not so quickly rejected. The pulse was no quicker and the pains were not so frequent. On the morning of the 18th, the pulse being feebler and having gone up to 100, and the other symptoms persisting, the vomited matter being now decidedly stercoraceous in character, Dr. Gordon impressed upon the brother the necessity of having a second opinion, as he felt convinced that strangulation existed and that operation was imperative; so, having obtained his consent, he sent for me. It was 6 P.M. when we saw the patient together. We found the pulse had risen to 110, the nose and ears cold, and the expression anxious. On examining the tumour, we came to the conclusion that immediate exploration was essential, and, having had the patient's permission to operate, we proceeded to do so without further delay. Dr. Gordon administered chloroform, and I, failing by gentle taxis to produce any diminution in the size of the hernia, found, after opening the sac, which I thought necessary considering the length of time since the first symptom was noticed (six days), a mass of omentum, and behind it and to its inner side a knuckle of deeply congested intestine. There was a good deal of blood-stained serum in the sac. Having divided the constricting part I was able to reduce the intestine, but reduction of the omentum was not so easily effected, the cause being probably adhesions. I therefore ligatured it close to its neck in two halves with strong silk, removed it, and left the stump at the bottom of the wound, hoping thus, if the patient survived, to enable him to wear a truss with comfort. The intestinal hernia was apparently a direct inguinal, and the omental portion indirect. The edges of the incision, about an inch and a half long, were brought together by three silver sutures, and a little bit of drainage tube was left in, to be removed next morning: iodoform dusted over, lint squeezed out of perchloride of

mercury solution laid on and strapped, a pad of cotton wool, and a spica completed the dressing. He had a morphia injection immediately, and nothing by the mouth for the following twenty-four hours. With the exception of a troublesome hiccough (which commenced on the 20th and lasted for eight or ten days, and which was greatly relieved by morphia subcutaneously), and of a slight oozing of pus from the upper and outer part of the wound, nothing unfavourable happened subsequently. The bowels acted copiously on the twelfth, and again on the thirteenth day after the operation. Having been fitted with a truss, he resumed his ordinary occupation, which is not of a laborious character, in less than a month after the operation.

Remarks.—It will be noticed that there was entire absence of impulse on coughing (which, of course, is usual in acute strangulation), and of pain on manipulation of the hernia whenever sought. Both symptoms were easily explained by the conditions found. The sensitive small knuckle of intestine was protected from one's fingers by a good thick covering of omentum.

Liverpool.

IDIOSYNCRASY WITH REGARD TO ANTIPYRIN.

BY J. TAYLOR ROBB, M.D.

HAVING lately had a patient suffering from migraine in the Isle of Thanet, I prescribed fifteen-grain powders of antipyrin to be used as a preventive against the attack. She had only taken one of the powders when she experienced the following symptoms, told in her own words. They were as follows: "On June 5th I awoke with a slight headache and took a powder about half an hour after a light breakfast. About eight minutes after taking the powder I felt great nausea; then I had a most violent attack of sneezing, which lasted for some time, with temporary catarrh from eyes and nose. I also suffered from queer sensations at the back of my neck and up my head, extreme tightness of the chest and throat, with loss of voice and great difficulty of breathing. The headache had gone, and my head felt the best part of me. Gradually I got my breath back, and my chest and throat got relieved, but my voice was hoarse for the rest of the morning." There was no itching of the body, nor was there any rash as far as the patient knows. There was no coppery taste in the mouth, nor were there noises in the ears. The sickness from the migraine disappeared, and the headache did not return. Not having seen the patient under the influence of the antipyrin, I was unable to elicit any other symptom from her. There was no gastro-enteritis. The patient before she communicated with me again had a second headache, and took half a powder. This produced no ill effects; it only partially relieved the headache and made her feel sleepy. According to Professor Sée, the use of antipyrin is not followed by sleep or nervous stimulation. Professor Lépine considers that it is both an anodyne and nerve stimulant, so that its action is opposed to morphine in that it relieves pain without depressing the higher brain centres. Whether the sleep is the result of the relief from pain in these cases it is impossible to say. I have never seen a patient complain of sleep after a large dose of antipyrin—only after a small one, such as five grains. Although in large doses it acts as a nerve stimulant, in smaller ones it may have some soporific effect.

Elizabeth-street, Eaton-square, S.W.

A CASE OF TROPICAL LIVER ABSCESS; ANTISEPTIC INCISION AND DRAINAGE; RECOVERY.

BY FRED. W. ALLWRIGHT, M.D., L.R.C.S.I., &c.

THE following case may be of interest as an addition to those reported by Surgeon-Major Stevenson in THE LANCET of June 9th.

Richard H——, late Royal Artillery, aged twenty-seven, had been in India for a period of four years. He had had dysentery, but never syphilis, and was of temperate habits. He consulted me for a swelling over the region of the liver, stating that he had previously been treated for enlargement of that organ and dyspepsia. I made a full examination. The tongue was furred and the bowels constipated. The liver was very much enlarged, and the dulness extended from the level of the nipple to about two inches and a half below the ribs. A little to the right of the ensiform cartilage there was a distinct swelling raised above the surrounding skin about a quarter of an inch, which was tender to the touch; he also complained of pain under the right shoulder. There was considerable bulging over the whole of the hepatic region. I diagnosed hepatic abscess. A mixture was prescribed, containing chloride of ammonium, a solution of potash, and nitro-muriatic acid. I saw him a week afterwards, on Sept. 14th, when the tumour was slightly increased in size, and fluctuation well marked. I passed the needle of a hypodermic syringe into the tumour, and withdrew a syringeful of flaky pus, intermixed with a chocolate-coloured material. This was examined microscopically, but no "hooklets" were visible. I thought it might be hydatid disease. I determined upon using the aspirator, and accordingly did so on Sept. 18th, when twenty ounces of the same kind of material were withdrawn, which relieved the patient. After the operation there was no elevation of temperature, and no ill effects followed. There was no diminution in the dulness after the evacuation of the abscess; at least it was not perceptible. The mixture was continued, and the patient was fed on light, nutritious diet, and a pill containing a quarter of a grain of podophyllin administered every alternate night to regulate the bowels. No further treatment was adopted until the following November, when the bulging over the liver was found to be increased in size. The patient, making no progress towards recovery, was anxious to have something further done. An operation was decided upon. On Nov. 21st chloroform was administered, and an incision made, with antiseptic precautions, about two inches in length from the ensiform cartilage, parallel to the last rib; this gave exit to about five ounces of pus, mixed with the same chocolate-coloured material. A full-sized drainage tube was inserted, and the cavity of the abscess measured about six inches in depth. The wound was dressed with carbolised tow. The temperature was normal the evening after the operation, and never rose above 100·3° subsequently. The only complication that followed was a rather troublesome cough, but this gradually subsided. The discharge continued for two months after the operation, and from time to time there were several pieces of what appeared to be liver substance discharged through the drainage tube. The cavity of the abscess was washed out with warm iodised water (1 dr. of iodine to 8 oz. of water), and afterwards with a weak solution of iodised phenol. The cavity gradually contracted, and the greater part of the dulness disappeared. The subsequent progress was in every way satisfactory, and the recovery complete. At the present time the patient is in perfect health.

The case is interesting from the large size of the abscess, and the comparatively slight constitutional disturbance which it caused.

Claytons, Bourne End, Bucks

A CASE OF CYSTIC MYOMA OF THE UTERUS; HYSTERECTOMY; RECOVERY.

BY H. G. PLIMMER, M.R.C.S. ENG. &c.

E. N——, aged thirty-seven, a lady's maid, was sent by her mistress to me on Jan. 21st as a case of "ovarian tumour." She was on that day admitted into the Norwood Cottage Hospital under my care. Her family history is unimportant. She had scarlatina when a child, but otherwise no illness until four years ago, when she had a good deal of irregular pain in the abdomen. As this lasted some weeks, she went to a surgeon, who examined her, and told her she had a tumour. The pain got better, and she thought nothing more of the tumour until four months before admission, when the pain recurred. She was up to this time always quite regular, and had no leucorrhœa. From this time the pain grew worse, and the discharge at her periods became profuse and exhausting. Two months later she first felt the tumour in her abdomen herself. She had no vomiting and no metrorrhagia. She gradually got weaker, had more pain, and finally became unable to do her work. On admission to the hospital, I found her to be a tall, spare woman; complexion sallow, very dusky, almost pigmented about her eyes and forehead; she looked old for her years, and was somewhat

grey. On examining the abdomen, a pear-shaped tumour could be felt, which was symmetrical and quite central. It extended to just above the umbilicus, and was movable. It was soft, and gave distinctly the feeling of fluctuation. The aortic impulse could be seen and felt. On examination per vaginam, the os could be felt very high up, pointing almost backwards; a large soft mass could be felt posteriorly to the uterus, which was movable only with the tumour. The uterine arteries could be felt in the vagina. The sound could not be got into the uterus, and a small catheter would only pass for about an inch. On Jan. 24th I punctured the tumour midway between the umbilicus and pubes in the middle line with the smallest aspirating needle. Nothing but a few drops of blood came, which confirmed the diagnosis of the tumour being uterine. Believing it to be a fibroid, it was decided to remove the uterine appendages. Accordingly, on Jan. 28th, with the assistance of Drs. Sydney Turner, J. H. Galton, Miller, and Deyns, I began this operation. Chloroform was administered. An incision three inches long was made in the middle line, and the peritoneum opened in the usual way. The ovaries could not be reached on account of the size of the tumour, which was reddish in colour, and so soft and fluctuating that we felt certain it must contain fluid. We tapped it with an ordinary trocar; nothing came but blood, and this was stopped, with much difficulty, with the cautery. It still felt to us so certain that there was fluid within it that I punctured it with Spencer Wells's ovarian trocar, and still nothing came. We then unanimously decided to perform hysterectomy. I enlarged the incision up to the umbilicus, and down to the pubes, and, with a great deal of difficulty even then, drew the tumour, which was nowhere adherent, out of the wound. The ovaries and tubes could then be seen and felt, and both were found to be diseased. We decided to remove them with the tumour and uterus, which were indistinguishable one from the other. Koeberlé's serre-nœud was applied so as to include the tumour, ovaries, and tubes, and was screwed up. The whole was then amputated. A large quantity of blood from the tumour escaped into the pelvis, which was then irrigated with plain water at 110° until the blood was washed out. The stump was secured in the lower angle of the wound, and two hare-lip pins passed through it just above the wire. Five deep and four superficial sutures of carbolised silk were put in, and the wound dressed with sublimate wood-wool. The urine was drawn off for eight days after the operation, and the bowels acted on the eighth days by means of enemata. She had some cystitis, and the bladder remained irritable until sixteen days after the operation. The hare-lip pins (used because the right pins were not available) caused great irritation, and were removed on the eighth day. The sutures were removed on the ninth and tenth days. The serre-nœud with the stump came away on the eighteenth day. The temperature was 103° before the bowels acted, and on two days during the attack of cystitis it was 101°, otherwise it never exceeded 99°. She left the hospital on March 10th, and is now quite well. The tumour weighed 5 lb. 8 oz. It was a so-called cystic myoma, the myomatous fibres being opened up by spaces, having no proper lining, and containing a mucoid substance.

Norwood.

WESTERN OPHTHALMIC HOSPITAL.—In aid of the funds of this institution a meeting was held on the 18th inst. in the Portman Rooms, Baker-street, Sir Michael Hicks-Beach presiding. During an existence of thirty-two years the hospital has relieved 54,000 poor sufferers, and there had been 300,000 separate attendances. The annual expenditure was only about £700, and last year 54 in-patients were admitted, while the out-patients numbered 1926. The annual subscriptions now were not more than one-fifth of the outlay, small as it was. An additional yearly subscription of £150 was required in order to utilise properly all the ten beds. The chairman earnestly appealed for public financial support; following which several resolutions were proposed, and the meeting terminated.

ROYAL EDINBURGH ASYLUM.—The following candidates passed the examination for the certificate in Psychological Medicine on the 18th and 19th inst., by the examiner of the Medico-Psychological Association of Great Britain and Ireland:—E. F. Armour, M.A., M.B., C.M. Edin.; John Bruce; H. C. Chapman, M.B. Lond.; P. C. Evans; J. H. W. Laing, M.A., B. Sc.; P. J. Rice, M.D.; W. A. Turner, M.B.; G. R. Wilson.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

VARICOSE ANEURYSM AT BEND OF ELBOW; LIGATURE OF RADIAL, ULNAR, AND BRACHIAL ARTERIES AFTER FAILURE OF COMPRESSION; CURE; REMARKS.

(Under the care of Mr. WILLIAM ANDERSON.)

VARICOSE ANEURYSM at the bend of the elbow is so rarely met with in the surgical practice of the present day that the following account of a case, with the remarks appended by Mr. Anderson, will be perused with interest. For the notes we are indebted to Mr. T. H. Dickson, dresser.

T. P——, a carpenter, aged thirty-nine, was admitted on Sept. 1st, 1887. He stated that he had pierced his left arm at the bend of the elbow with the blade of a pocket-knife three days previously while cutting a piece of wood. The hæmorrhage, which was profuse, was arrested by the application of a tourniquet upon the brachial artery, but on removal of the instrument a pulsating swelling showed itself over the seat of injury.

On admission, a small puncture, incompletely healed, was seen nearly opposite the insertion of the biceps. A little above this point was a soft, throbbing, circumscribed tumour of about the size of a chestnut, and the neighbouring superficial veins were somewhat distended. A well-marked thrill was perceptible over the tumour and along the median, median basilic, and median cephalic veins, and could be traced in the course of the radial artery as far as the wrist. On auscultation a low rumbling sound as of a train passing through a tunnel could be heard over the bend of the elbow, and followed as a "whisking" murmur along the arterial, radial, and upper part of the ulnar arteries. The radial pulse at the wrist was less forcible than on the uninjured side. Compression of the main artery caused the venous distension to subside, but the tumour, although softer and smaller, did not disappear until emptied by direct pressure.

On the following day an Esmarch bandage was applied from the hand upwards to a short distance above the elbow, and the patient was kept under the influence of morphia. Two hours later the bandage, which caused great suffering despite the narcotic, was replaced by digital compression of the brachial artery. The vessel was commanded for six hours, but at the end of this time, no sensible impression having been made upon the aneurysm, the treatment was discontinued, and the arm was enveloped in cotton wool and placed in a flexed position upon a pillow.

An operation was performed by Mr. Anderson on Sept. 10th. The limb having been rendered bloodless by an Esmarch bandage, the integuments over the tumour were divided, and the median, median basilic, and median cephalic veins were ligatured. The deeper tissues were, however, so much infiltrated with reddish serum that it was impossible to distinguish the structures from one another, and it was necessary to replace the elastic ligature by digital compression in order that the course of the arteries might be traced by pulsation. The aneurysmal sac, the walls of which were extremely thin, was then seen to be connected with the deep median vein on the one hand, and the radial side of the bifurcation of the brachial artery on the other. It was laid open freely, and the brachial, radial, and ulnar arteries were secured with carbolised silk close to the point of division of the main trunk, the wound in the brachial lying between the three ligatures. Care was taken to avoid any unnecessary disturbance of the venæ comites. Some bleeding occurred during the early part of this stage of the operation, owing to the accidental failure of the compression of the brachial trunk, and this, together with the matting together of the parts by old extravasation and inflammatory products, rendered the process of isolation of the radial and ulnar arteries somewhat tedious and difficult.

A drainage tube was inserted, the wound dressed antiseptically, and the limb, enveloped in cotton wool,

maintained in a flexed position. All went on well, the temperature and general nutrition of the arm remained good, and, although no pulsation at the wrist could be felt, the circulation appeared to be perfect. The wound healed somewhat slowly, but without complication, and the patient was discharged on Oct. 6th. When seen three months later, he had resumed work, and the strength and utility of the arm were fully restored, but the radial pulse still remained imperceptible.

Remarks by Mr. ANDERSON.—Varicose aneurysm at the bend of the elbow, a rather frequent accident in the days of periodical venesection, is almost a curiosity for the present generation of surgeons. In most of the older text-books, a very careful distinction is made between the two lesions which may follow a punctured wound implicating an artery and a vein: varicose aneurysm, where an intermediate sac, communicating with the adjacent apertures in the two vessels, is formed at the expense of the surrounding tissues; and aneurysmal varix, in which the communication is direct, and the vein undergoes dilatation as a result of the ingress of the arterial blood stream. It has been shown that in the latter case little danger or even inconvenience may arise, and the active interference of the surgeon is not necessarily called for; while in the former the tendency is towards progressive enlargement of the tumour and all the danger of true aneurysm, and consequently, failing the rare success of compression, an operation of some kind is almost inevitable. In both conditions, if, as must usually be the case, the vein has been transfixed by the penetrating instrument, an aperture must be present on the side of the vessel not in communication with the artery, and we are left to infer that this opening quickly becomes sealed by natural processes, since no complications are said to arise in connexion with its existence. It is not easy, however, to understand why this should be so. The treatment recommended in a case of varicose aneurysm is—firstly, to expose and open the sac; secondly, to find the apertures of communication with the vein and artery; and, lastly, to tie both vessels above and below the point of injury. Nothing could be clearer than these written directions, but to carry them out will often prove a far less simple matter than might be expected. The enlarged and tortuous veins, the extremely tenuous and perhaps ill-defined wall of the false aneurysm, and the infiltration of all the tissues with extravasated blood and inflammatory products consecutive to the original injury, must often interfere with the recognition of anatomical landmarks; and, as the thin-walled sac collapses upon incision, the discovery of the two apertures with a probe may involve much delay and interfere with the wound. Moreover, although the exact position of the arterial lesion must of course be ascertained, the detection of the opening in the vein is not essential, for, after the sac is laid freely open and the arterial communication cut off, a simple compress over the wound is enough to prevent any trouble from this source. If, as may be expected, the arterial wound is found near the bifurcation of the main vessel, whether in radial, ulnar, or brachial, the treatment adopted in the present case would appear to be the safest, as the ligature of the trunk and its two branches (with the radial recurrent if necessary) blocks every channel by which the blood can gain access to the injured point, leaving open the large recurrent branches of the ulnar and posterior interosseous arteries, the stream through which is quite sufficient to establish a free collateral circulation and to ensure the nutrition of the forearm.

LEEDS GENERAL INFIRMARY.

ADHERENT PERICARDIUM OF RHEUMATIC ORIGIN; HÆMORRHAGE INTO PERITONEAL CAVITY; DEATH.

(Under the care of Dr. BARRS.)

THE patient had been seen by Dr. Barrs eight weeks before he was admitted (by the courtesy of Dr. Eddison) into the infirmary. He was then suffering from pericarditis and pleuritic effusion, the remainders of an attack of acute rheumatism of some six weeks' duration. The following notes were taken from the clinical report of Mr. H. A. Smith, house physician.

Henry L——, aged twenty, a boiler maker, was admitted on March 17, 1888. He had never, previous to the present illness, suffered from acute rheumatism or chorea. Seventeen weeks before admission he began to have pain in the right foot, then in the right hip, soon followed by general articular and muscular pains. At the end of a month he had sufficiently recovered to be allowed to get up and go about the house. Fourteen days later the legs began to swell, and he became short of breath on moving about. The abdomen began to enlarge, and he was compelled to return to bed. Eight weeks before admission (at which time he was seen in consultation by Dr. Barrs) the left chest was tapped, and he was found to be suffering from acute pericarditis. He afterwards remained in a stationary condition for six weeks, at the end of which time he began to vomit, and vomited daily until admission. This relieved the dyspnœa to some extent. There had been no hæmatemesis.

Present condition.—The patient is a pale-faced lad, sitting propped up in bed, and breathing with very great difficulty, 46 in the minute. Pulse 128, regular. There is now no pain in the joints; the limbs are wasted and the hands tremulous. Chest: Expansion poor, but equal on the two sides; apparently some slight rounding of the lower part of the left chest; epigastric pulsation marked; vocal fremitus is equal on the two sides in front above the level of the third rib, below this on the left side it cannot be felt; no rub or thrill felt. On percussion in front, there is a clear note on the left side down to the level of the third rib, then dulness begins and extends to the costal margin, and is continuous through the lateral aspect with the dulness in the posterior part of the left chest, which reaches as high as the angle of the scapula. On the right side the area of cardiac dulness extends to half an inch beyond the margin of the sternum. In the fifth space in front on the left side, about two inches from the midsternum, a sharp pain is caused by percussion. In the back of the chest the vocal fremitus is lost completely on the left side below the inferior angle of the scapula, and on the right side it is absent below the level of the tenth rib. The percussion note is dull over the same areas, and the breath and voice sounds are very much impaired or lost. Heart: There is marked epigastric pulsation; no præcordial bulging; apex beat cannot be defined; no thrill felt; area of dulness is greatly increased, beginning above at the level of the third rib; below and to the left is lost in general dulness of chest, and on the right extends to half an inch beyond the margin of the sternum. On auscultation, a systolic bruit is audible at the apex, in the axilla, and also in the back. The aortic and pulmonary sounds are feeble, but apparently clear. The liver is, in all probability, enlarged, but owing to the rigidity and tenderness in the epigastric region its limits cannot be defined by touch. The spleen cannot be felt. The patient was ordered a digitalis mixture every six hours.

March 20th.—Pulse 135; respiration 48; evening temperature 102°. Left chest tapped, and thirty-four ounces of fluid withdrawn.

21st.—The breathing has been much easier since tapping yesterday. Seven ounces of urine were passed in twenty-four hours; not albuminous.

24th.—On the whole, since the tapping he has been easier. He is complaining of pain in the left side. Vomited yesterday. Pulse 102; respiration 40; temperature 99°.

26th.—Has not vomited since the 24th. Eighteen ounces of urine passed during last twenty-four hours. He is not so short of breath. Dulness behind not increased.

28th.—Vomited again yesterday morning. The heart sounds are unaltered from the description on admission.

April 2nd.—Has not vomited since March 30th. He is sleeping better, and the cough which has previously distressed him is less. Seven ounces of urine passed in twenty-four hours; sp. gr. 1028; no albumen.

5th.—Vomiting has been persistent and uncontrollable since last note. Nourishing food was ordered on the 3rd inst., but this only made things worse; he vomited steadily after every mouthful. The chest behind is distinctly clearer, the breath sounds more audible, and the dulness does not extend so high as it did.

7th.—The patient vomited almost continuously since last note.

12th.—The medicine ordered on the 7th (arsenic and resorcin) caused much diarrhœa, but he did not vomit again. The abdomen is now very painful. The feet were a little œdematous on the 9th. On the 10th all medicines were stopped, and six leeches applied to the epigastrium. The bites bled freely afterwards, and the bleeding had to be arrested by sutures. The pain was not relieved, and morphia

was given hypodermically. Pulse 128; respiration 46; temperature 102°. On the 11th one-sixtieth of a grain of digitalin in granules was ordered every four hours. The patient had a very bad night, coughing incessantly. The abdomen was very painful, and morphia had to be given again. This morning (April 12th), at 9 A.M., the patient had a sudden attack of dyspnœa, became very pale, and complained of intense pain in the abdomen. The dyspnœa and pallor became extreme, the abdominal pain persisting, and he died apparently from syncope.

Necropsy.—Both pleural cavities, practically obliterated by recent soft adhesions, specially thick on the upper surface of the diaphragm. Lungs tough and semi-solid in parts. Pericardial cavity completely obliterated at every point. Separation of pericardium impossible without laceration of muscle. No unusual adhesions to mediastinal tissues, the inner surfaces of lungs being only softly adherent. The heart with attached pericardium weighed twenty-five ounces, and was clearly much enlarged, the right and left sides maintaining their normal proportions to each other. The cavities were all dilated, especially the ventricles. The muscle looked pale, and its line of demarcation from the pericardium was indistinct. A large papillary muscle in the left ventricle showed distinct "pheasant-wing" markings. No hæmorrhage into the muscle. The aortic valves looked a little opaque and sodden, but were practically healthy. The mitral orifice admitted four fingers (obvious dilatation), but the valve itself was quite normal. The right valves were healthy and the aorta normal. The peritoneal cavity was practically filled with fluid blood and clots; over forty ounces of fluid were measured, and there would be a considerable quantity left after that in the recesses of the cavity. This fluid blood presented the ordinary characters of blood under such circumstances. Lying over the right lobe of the liver was a large clot the size and thickness of a full-time placenta. (The appearances were precisely such as one has seen in cases of laceration of the liver, for instance; and Dr. Barrs at once suspected rupture of that organ or of the spleen, but after a most prolonged search and injecting the abdominal vessels, and resorting to all the plans he could think of he was quite unable to find the source of the bleeding.) On the convex surface of the left lobe of the liver, and in contact with the abdominal wall, was a large patch of toughish-looking lymph. Between the lobulus quadratus and the left lobe there were also some soft recent adhesions, with hæmorrhage into them. The liver itself showed the ordinary "nutmeg change." Dr. Barrs carefully examined all the trunk branches of the abdominal aorta for aneurysm, but could find none. All the organs not referred to were healthy.

Remarks by Dr. BARRS.—The case narrated affords in its essential conditions, though not in its mode of death, a striking example of one of the more immediately fatal cardiac complications to which acute rheumatism gives origin. In THE LANCET for 1881, I published a small series of cases of adherent pericardium of rheumatic origin terminating in death by cardiac dilatation, and expressed the opinion that this lesion ought in all probability to be regarded as an almost certainly fatal complication of rheumatic fever. The present case is one of unusual interest because the march of events can be fixed with greater exactitude than usually happens in hospital practice. When I saw the man eight weeks before he came into the hospital, he presented all the usual evidences of acute and recent pericarditis. When admitted the signs of pericarditis were not evident, and at the end of four weeks longer he is dead, with complete and firm obliteration of the pericardial cavity. So that it is shown, by this case at least, that in the course of three months an attack of acute rheumatic pericarditis, with its attendant myocarditis, is able to bring about a fatal condition, characterised mainly by extreme but anomalous manifestations of cardiac dilatation and alternate failure. The immediate cause of death was the intra-peritoneal hæmorrhage, for which, as I have said in the body of the report, I was unable at the necropsy to find any cause whatever. But apart from this, which I cannot but regard as an accident, the case was pursuing a rapidly downward course, the grave disturbance of the circulatory apparatus progressing steadily towards a fatal termination, in spite of an energetic and varied treatment. I am not acquainted with any recorded case of intra-peritoneal hæmorrhage ending fatally, for which no obvious cause could be found; neither am I aware that it has been observed to occur in cases of cardiac disease, either as a result of venous stasis or any of the other conditions which give rise to hæmorrhages in other localities.

THE SAMARITAN HOSPITAL FOR WOMEN, BELFAST.

THREE CASES OF RARE OCCURRENCE.

(Under the care of Dr. MCMORDIE.)

CASE 1. *Congenital deficiency of the recto-vaginal septum; operation; cure.*—M. H——, aged twenty-five, single, appeared in the out-patient department on April 15th. She gave the following history. The catamenia appeared at the age of sixteen, and since then she has only menstruated seven times at irregular intervals. She had not "seen anything" for three years. She complained of being nervous, of heats and colds, and of pain in the vagina and lower back. Owing to her irritable condition it was impossible to make a vaginal examination without an anæsthetic. The following day, having been put under the influence of chloroform, an examination was made. The vagina was found to be very small and the hymen intact. A finger of one hand being passed into the vagina, lumps of hardened fæces were found in the upper part, close to the cervix uteri. A finger of the other hand being introduced into the rectum, it passed through an opening in the vaginal septum and met the other finger in the vagina. The opening was about the size of a sixpence, and situated about one inch from the anus. The edges were pared freely towards the vagina and brought together by silver wire. The union was perfect, and she was discharged cured three weeks from her admission.

There are two points of interest in this case: (1) The long time the opening had existed without being detected. (2) The menstrual fluid may have passed unnoticed by this opening instead of by the aperture in the hymen.

CASE 2. *Foreign body in the rectum; removal; recovery.*—K. H——, aged forty-four, married; twelve children and two miscarriages, the last one a miscarriage at three months, two months before her admission to the Samaritan Hospital on March 15th. For three weeks previously she had vomited after every meal. She complained of severe pain in the hypogastric region. There was a movable abdominal tumour about the size of an adult head. An examination by the finger per rectum discovered a hard body lodged in the anterior wall, on a level with the promontory of the sacrum. There was a considerable amount of swelling and tenderness at this point, so that with some difficulty the finger could be passed beyond it. A speculum forceps was passed up, and the body seized and removed. It proved to be a thin, flat piece of bone, triangular in shape, one-third of an inch at the base, and the sides of the triangle measuring half an inch. It appeared to be a portion of the skull of some animal. The bowel was cleared out by copious enemata, and the patient recovered.

CASE 3. *Rapid development of a thyroid cyst.*—E. K——, single, aged twenty, was admitted to the wards on March 1st. The right lobe of the thyroid gland was swollen and tense, with an elastic feel, and about the size of a small orange. It had developed very rapidly, the girl stating that she first noticed it about seven days before her admission. The cellular tissue surrounding it was inflamed and œdematous; it was difficult to be certain of the nature of the contents, so an exploring trocar was passed and some clear serous fluid drawn off. There was now no doubt that the swelling was an acute bronchocele, confined to the right lobe. The isthmus and the left lobe were not affected. The swelling was tapped, and two ounces of clear fluid drawn off. Nothing was injected. The girl was a native of Portrush, and had been at service in Belfast for eighteen months. When admitted she was in a very anæmic condition. She left the hospital on March 16th much improved in health, and there was no appearance of any returning enlargement of the thyroid.

THE BRITISH ASSOCIATION.—At a meeting held in the Mayor's room at the Town Hall, Leeds, on the 20th inst., it was resolved to renew the invitation sent last year to the British Association, to hold their meeting in that town in 1890, and to raise, for expenses, a guarantee fund of £5000.

Notices of Books.

The Localisation of the Lesions of Phthisis; its Relation to Diagnosis and Prognosis. By J. KINGSTON FOWLER, M.A., M.D. Cantab. London: J. & A. Churchill. 1888.—Any contribution to medicine that enables us to attain greater precision and security in diagnosis, or in forecasting the progress of disease, must always be welcomed. The soundest method of obtaining such result is by careful and exact comparison of clinical and pathological facts. This has been the aim of the author of this *brochure*, who, in pursuit of a line of inquiry analogous to that taken up by Dr. Ewart in his Gulstonian lectures six years ago, has succeeded in demonstrating, in a manner that carries conviction with it, the not unimportant fact, that in chronic phthisis the extension of disease in the lungs follows a definite and regular course, and that any anomaly in this regular "line of march" must be attributed to some disturbing factor special to the case. His conclusions are based upon an extensive experience as pathologist to the Middlesex Hospital, and the adoption of a systematic method of examination of phthisical lungs, whereby the relations and grouping of the lesions were readily displayed. He has thus arrived at results which, whilst in general agreement with accepted facts, go beyond these in many important particulars. Without attempting any detailed exposition of his facts, it must suffice here to say that Dr. Fowler clearly proves that the primary seat of disease is not the extreme apex of the lung, but a point some inch and a half below this, and nearer the posterior than the anterior surface; or else (less often) at the outer part of the upper lobe corresponding to the first and second interspaces below the outer third of the clavicle. Of more importance is the proof of the fact that the apex of the *lower* lobe is liable to very early infiltration, as a rule, before the opposite lung is affected; at a time, that is, when physical signs first reveal the existence of disease in the lung. On the chest wall this point corresponds to a spot opposite the fifth dorsal spine in the inter-scapular region. From these points there is gradual extension downwards towards the base; and basic lesions, apart from such extension, are almost invariably non-tuberculous. The monograph contains further details of the distribution of such lesions, of the transference from one lung to the opposite, &c.; and the explanation is given that the regularity of arrangement and sequence depends upon the tubercular disease spreading by inhalation, but that where the virus is disseminated through the blood and lymphatic system no such regularity obtains. The bearing of such conclusions upon diagnosis and prognosis is therefore obvious.

An Introduction to the Study of the British Pharmacopœia. By RAWDON MACNAMARA, Professor of Materia Medica, R.C.S.I., &c. Pp. 121. London: H. K. Lewis. 1888.—In his preface Professor Rawdon Macnamara says that the observations in this little book "are of the most elementary character; were they otherwise, they would be unsuited to the class of students for whom they are intended—beginners." It is from the "beginner's" standpoint, therefore, that the book must be judged. It is very slight in structure, consisting of little more than the first lecture probably given at the commencement of any systematic course upon Materia Medica, introducing the student to the general characters of such substances as gums, resins, volatile and fixed oils, and the like. Then follow the pharmacopœial preparations, treated in some detail, with an occasional light remark to help to fix a fact. The characters and tests form a large portion of the book, no less than forty pages being devoted to them. We cannot but think that a beginner is rather hardly dealt by in being presented with thirty-two pages upon the volumetric tests of the Pharmacopœia. A few remarks upon modes of administering medicines and a therapeutic classification of the articles contained in the Pharmacopœia draw this unpretentious little book to a close.

Untersuchungen über Heterogenese. By Dr. A. S. FOKKER. Pp. 66. Groningen: Noordhoff.—This is a pamphlet constituting the third part of a series, the other numbers of which have not fallen into our hands. The author, however, in the introduction, states that in them he demonstrated that protoplasm taken aseptically from a living animal has the power of exciting changes which effect the conversion of starch into sugar, and can develop acid from sugar. Since they were written Reinkes has shown that leaves of plants and germinating oats and barley, after six minutes' exposure to steam at a temperature of 212° F., can still eliminate carbonic acid gas. Fokker was therefore induced to institute experiments to determine the temperature at which protoplasm lost its vital properties, and he has found that it requires a much higher temperature than is ordinarily supposed, approximating in this respect the spores of fungi. The same pamphlet contains a notice on the nature of Hæmatocytes, which he regards as mere fragments, having no great importance; also a notice of Sphinx gobio, and another on the comma bacillus.

Aids to Dental Surgery. By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S. London: Baillière, Tindall, and Cox.—This is a digest of the various dental manuals, and, considering the small space—only 100 pages,—contains a large amount of information. There is no attempt to deal with the practical part of dental surgery, which the author truly says can only be learnt "at the chair." The different theories as the pathology of cavies are clearly stated, and no undue prominence is given to the author's own views (Messrs. Underwood and Milles were the first to point out the invariable presence of micrococci in the tubules of carious dentine). Pyorrhœa alveolaris is regarded as a disease of constitutional origin, and its principal causes struma and syphilis, but no mention is made of Professor Victor Horsley's observations with regard to its relative frequency in cases of locomotor ataxy. The book is brought fairly up to date, and should be of value to the student or the practitioner who wishes to refresh his memory.

La Chirurgie Journalière. Leçons de Clinique Chirurgicale. Par ARMAND DESPRÉS, Chirurgien de l'Hôpital de la Charité, &c. Troisième Édition. Avec 46 Figures intercalées dans le texte. Paris: J. B. Baillière et Fils. 1888.—These clinical lectures on every-day surgery form a volume of 850 large octavo pages, and they deal at some length and with considerable minuteness of detail with a great variety of subjects. The one noticeable defect in the work in an English reader's eyes is the absence of an index; this greatly lessens its value for ready reference. The subjects dealt with lend themselves very readily to illustration, and an allowance of only 46 rather inferior woodcuts spread over 850 pages might very well be greatly increased. The lectures themselves are very good, and will be read with interest and advantage, although in places there appears to us to be a tendency to draw too fine distinctions.

The Quarterly Journal of Microscopical Science. Edited by Professors RAY LANKESTER, THISELTON DYER, KLEIN, MOSELEY, and SEDGWICK. No. CXII. April, 1888. London: J. & A. Churchill.—This part is in great measure occupied with an admirable monograph on the singular genus of Arthropods, named Peripatus, and especially of the "Capensis" species, by Adam Sedgwick, to which are appended some notes on Peripatus Capensis and P. Novæ-Zealandiæ, by Lilian Sheldon. Dr. Nicholas

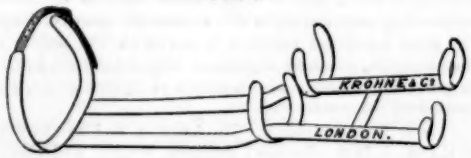
Zograff communicates a paper on the so-called Labyrinthine apparatus of the Labyrinthine Fishes. Arthur Dendy, in a memoir, sends studies on the comparative anatomy of sponges, including Ridleia and Quassilina. Lastly, there is a memoir by Klimenberg on the development of Lopadorhynchus.

New Inventions.

KROHNE'S MODIFICATION OF THOMAS'S DOUBLE HIP SPLINT FOR THE TREATMENT OF DISEASES AND INJURIES OF THE SPINE.

THE well-known Thomas's double splint for disease of one or both hip joints (Fig. 1) is rendering great service in the treatment of that affection. Mr. Krohne has added

FIG. 1.

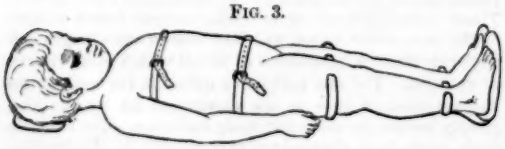


to this splint a pelvic band, a support for the shoulders, neck, and head, and two sliding foot-pieces, as shown in Fig. 2. The two upright bars are made after the shape of a

FIG. 2.

healthy, normally formed child when in the recumbent position. They give posterior support to both sides of the spine. The two cross-bars, the pelvic band, and the band reaching to below the axillæ, support the pelvis and body laterally. The lower extremities are kept in position by cross-bars supporting the thigh and lower third of leg. The rest of the splint consists of the support for the shoulders, neck, head, and both feet, so that the entire body is supported, as shown in Fig. 3. The first object in the treatment of spinal

FIG. 3.



caries, weak or injured spine, is to devise means whereby the weight of the head and upper extremities is taken off the spine. This is obtained by placing the child and retaining it during the whole time of treatment in the uninterrupted recumbent position. By the aid of this splint the surgeon is enabled to carry out this treatment, and, the splint being applied next to the skin, the child can perform its natural functions without the removal of the apparatus. The second object is to fix the spine, which is effectually done by placing a wide bandage around the body and the splint; further, to prevent the child from raising its knees and using the legs as levers, and thus jerking the spine, both legs are bandaged to the splint. Both feet and ankles are also supported by a bandage, to protect the feet from the pressure of the bedclothes, and to prevent them from dropping forward or to either side. The bandages are not shown in the engraving. With slight modifications, the splint can be adapted to cases of disease or injury of the lumbar, dorsal, or cervical part of the spine. Most cases of advanced spinal disease are accompanied with contraction of one or both hip joints. No special notice need be taken of such contractions. The child is placed with its back on the splint, care being taken that the fold of the buttock corresponds with the angle of the splint, and the bandage is then applied. The child is next made to straighten its legs as much as possible. Any existing angle under the knee is filled up with soft padding, and the legs are thus bandaged to the apparatus. The contractions will be gradually corrected by the limb dropping, by its own weight and without pain, to the straight line of the splint, which will be noticed by the bandage getting loose. Some of the padding must then be removed and the leg re-bandaged. This has to be repeated until the limb has dropped to the straight line of the splint. The same straightening process goes on simultaneously in the spine, correcting lordosis or any other abnormal curvature. The pelvis forms the fulcrum, and the body above and the limbs below it are the levers, dropping by their own weight to the line of the splint without the slightest pressure being required. Throughout the whole time of treatment care must be taken not to cause pressure on any part. It is therefore absolutely necessary that the child be placed, after the adjustment of the splint, on a soft and loosely stuffed feather bed, when the bars of the splint sink into the bed, and the feathers rise and support the whole body. Some absorbent cotton-wool should also be placed on and above the heel. When supporting it by a bandage to the sliding foot-pieces, fresh cotton-wool should be employed whenever the bandage is replaced. Attention must also be given to all the cross-bars, which must be bent away from the body if undue pressure be caused by them.

MAJOR AMPUTATIONS TREATED ANTISEPTICALLY.

To the Editors of THE LANCET.

SIRS,—In reply to the questions contained in Mr. Vincent Jackson's letter of July 15th, I have arranged the sixty patients upon whom major amputations were performed in the Royal Infirmary, Newcastle-on-Tyne, during the year 1887, into four classes: 31 were under twenty; 14 between twenty and forty; 10 between forty and sixty; and 5 were over sixty years of age.

About fourteen years ago the antiseptic method of treating amputations was introduced into the Newcastle-on-Tyne Infirmary by Dr. G. T. Beatson (now practising in Glasgow), who came direct from Professor Lister's wards to fill the post of senior house surgeon here. The practice has in no essential particular altered since then. We cleanse the limb with carbolic lotion, operate under the spray, use gauze and cotton-wool dressings, catgut ligatures and sutures, and are careful always to provide for free drainage by means of indiarubber tubing. Our results before 1874 were very unsatisfactory, and I think our present good results are due mainly to the altered method of making and of treating wounds; but other factors have undoubtedly contributed. Among them I am of opinion that the appointment of a pathologist has been very important. The pathological staff is not now brought in contact with the surgical wards. Dissecting students, too, are not allowed to dress patients in the hospital. Opinions, I dare say, will continue to vary as to the relative value of a particular method of treating wounds and such other precautions as I have indicated. I think, however, it must be admitted that the exclusion from surgical wards of every recognised cause of infection so rigidly insisted upon to-day is due more to a belief in the truth of the theory upon which the antiseptic system is based than to any other cause.—I am, Sirs, yours truly,

Newcastle-on-Tyne, July 23rd, 1888. FREDERICK PAGE.

THE LANCET.

LONDON: SATURDAY, JULY 28, 1888.

THE Public Health Service will be affected in two important respects if the Local Government Bill is adopted as it now stands. An amendment, for which this service is indebted to Sir WALTER FOSTER, but proposed in his absence by Sir LYON PLAYFAIR, requires every medical officer of health appointed after January 1st, 1892, to be registered as the holder of a diploma in public health. Mr. RITCHIE very properly added the proviso that previous tenure of office in respect of a population of 20,000 during three years should exempt a candidate from the necessity of holding this diploma. Unfortunately, the clause as it now stands requires that these three years shall be those immediately preceding the date mentioned. There are many medical men who have in the past held far more important health officerships than those specified, but who will not be actually medical officers of health during that period, and who will therefore be disqualified by the Bill for further service unless they subject themselves to examination. This is obviously not intended, and we anticipate that the clause will be still further amended to make these services available under the new order of things. The health service has been an ever-changing one, and it would be unfortunate if the many who happen not to be in office in the three years mentioned were compelled, after prolonged service in large and thickly populated districts, either to devote valuable time to the preparation for an examination which has only very recently come into existence, or to abandon all intention of placing their experience at the disposal of local sanitary authorities. The Society of Medical Officers of Health has, we understand, taken steps to direct attention to this mistake.

The second point of importance to which we refer is the requirement that every medical officer of health shall send to the County Council a copy of every periodical report which is for the time being required by the regulations of the Local Government Board to be sent to that Board. The County Council are empowered to make a representation to the Local Government Board if it appears to them from such report that the Public Health Act of 1875 has not been properly put in force within the district to which the report relates, or that any other matter affecting the public health of the district requires to be remedied. This of course will have no application in districts of scheduled boroughs, but in other urban and rural districts it will, we hope, lead to the improvement of the sanitary condition of the locality. If the County Councils and the Local Government Board take definite action on the reports of medical officers of health, the effects will be seen in the still further lessening of mortality. We note with pleasure this additional recognition of the value of the health officer's services. The Legislature obviously intends that he shall occupy a position of independence in reporting truthfully upon conditions inimical to health which come under his notice. It is undoubtedly to the interest of the public that his services should be thus utilised; it is, on the other hand, but proper to point out that in performing these duties he should be protected against the loss which has too often been experienced by officers who have endeavoured, against the will of a negligent or obstructive authority, to improve the sanitary condition of their district. Nothing less than such protection will ensure the clause having in all parts of the country the results that are intended. Friction must inevitably occur between a health officer and a local authority whose negligence is thus criticised, and it has been but too plainly shown in the past what the results will be if the officer be left entirely under the control of the authority.

The change which we indicate evidently cannot be effected in the present Bill; it is foreshadowed by Mr. STANSFELD'S amendment, by which County Councils are empowered to appoint medical officers of health whose services can be made available in sanitary districts by an arrangement of the District with the County Council. We do not anticipate any immediate change will be brought about by this amendment, for District Councils will probably desire to retain the appointment in their own hands if they can only obtain the county officer's services on condition of contributing to his expenses. Sir LYON PLAYFAIR'S proposal in this and other respects was preferable. But Mr. STANSFELD'S amendment is nevertheless useful as indicating the acceptance by the Legislature of the principle that an advising officer such as the medical officer of health need not necessarily be absolutely under the control of those whom he advises. Mr. RITCHIE deserves thanks for his acceptance of this clause. It may be hoped that he will not fail to take the earliest opportunity of improving still further the position of the health officer. The success which has attended his conduct of the Local Government Bill through the House of Commons marks him especially as a statesman whose influence in the future might render still more valuable aid to the Public Health Service.

AMONGST all the subjects of pathology there are four to which attention is at the present day being much directed; they are, fever, inflammation, cancer, and tubercle. Each of these contains problems as yet in great measure unsolved, but upon the solution of which much depends for the advancement of medicine in its practical as well as its scientific aspect. To arrive at a right conclusion concerning the nature of fever is to explain the processes underlying the most common and constant of symptoms produced by the derangement of normal activities which we term disease. To correctly appreciate the causes and the process of inflammation is to secure the key to almost every morbid change that may arise in the body; whilst, could we arrive at the truth concerning the nature of cancer and tubercle, we should open up avenues for the adoption of more rational and hopeful measures of treatment in diseases that are the despair of medical and surgical art. It is true that there are not wanting those who affirm that, in spite of the knowledge that has been gained so far concerning these topics, there has been little if any commensurate advance in the way of successful treatment. To such objectors it can only be replied that we are still far from having arrived at a complete knowledge of all the factors,

etiological, physiological, and pathological, concerned in the production of disease, and that we do not despair of one day attaining the much-desired end. Much harm is done, and much baseless opprobrium has been cast on the labours of the scientist, by the indiscriminate and hasty adoption of therapeutic measures based on imperfect knowledge. Better far to follow the old empirical practices and the indications afforded by symptoms, than to adopt so-called radical or specific measures which have no real justification in fact. Nevertheless, we would not ignore the appropriateness of tentative therapeutics, since through their means it is conceivable that fresh light might be gained upon the nature of the morbid process against which they are directed. We may admit this freely, but nevertheless still maintain that it is to the pathologist we must look for the full solution of the problems of disease, provided that he embraces in his view not merely the lesions discovered after death, but all the circumstances of the origin and the progress of the disease he is investigating.

The two lectures on tuberculosis which Dr. WOODHEAD has given, in his capacity as Research Scholar of the Grocers' Company, illustrate well the value and importance of pathological inquiry. His exposition was clear and precise, and although by no means exhaustive of the subject, nor, indeed, pretending to much novelty, formed a strong argument in support of the bacillary doctrine, which has practically become the belief of the whole profession. At the same time he advanced a number of facts concerning the acquirement of tubercle by children which support a long-lasting contention of the influence of diet in its production. "Tuberculosis," he said, "has come to be regarded as the result of a specific morbid irritant, acting on tissues which rare so far devitalised that they are not able to cope with this irritant." This succinct definition embraces, it will be seen, the doctrine of the struggle between the tissues and the invading bacilli, which has been so remarkably shown to be something more than a theory by METSCHNIKOFF (who, be it noted, in the current number of VIRCHOW'S *Archiv*, demonstrates the phagocyte property of the giant cells of tubercle). Of course in one form or another this doctrine has always been held—even in times when disease was regarded as an entity, an invader which had to be cast out of the body. It has the merit of simplicity, and offers, moreover, an explanation of the varying susceptibility to "specific morbid irritants" shown by different individuals. The "irritant"—in this case the tubercle bacillus—must gain entrance into the body. There must be some condition, then, which enables it to penetrate the barrier afforded by the epithelial layer. Hence the bacillary doctrine requires for its support two hypothetical conditions—namely, a weak point in the epithelial covering, and a low vitality of the tissues. These hypotheses are not without substantial support in fact, for are we not accustomed to trace in many cases the origin of tubercular disease to previous catarrh of a mucous membrane, and in subjects whose vital resistance is lowered by insanitary surroundings or by inherited weakness? It would seem, then, as if modern pathology were advancing even beyond the "germ" and "soil" theories of a few years back, and taking its stand upon the normal resistance offered by the living cells to interference from without. Precisely the same idea may be applied to inflammation, to specific fevers, to syphilis, and all infective diseases, and may even be offered as an explanation of the disorderly cell growth in cancer; but when all is said there remains the more difficult task of demonstration of facts in support of such a hypothesis.

Of considerable interest were the facts quoted by Dr. WOODHEAD respecting the greater proclivity to tubercular disease of certain tissues at certain periods of life, and his figures brought out clearly the age-incidence of tubercular meningitis and mesenteric disease. He concurs with Dr. GAIRDNER in the opinion, which is undoubtedly well founded, of the comparatively great prevalence of abdominal, and especially of mesenteric gland, tuberculosis in children. He showed also that most cases of "tabes mesenterica" occur after the first year of life, and proceeded to discuss the very important subject, to which in all parts of the world great attention has of late been directed, of the influence of infected milk in accounting for this predominance. We take it as proved that tuberculosis is transmissible from diseased cows to the human subject through the medium of milk. The extent to which this transmission prevails is another question; and we gather from Dr. WOODHEAD that he regards it as essential to the infection of the child that its intestines should have been already in some way altered, and the vitality of the mesenteric glands lowered, before such infection is possible. The proneness to slight intestinal catarrh in early life, with the probability of associated lymphadenitis, practically offers no limit to the extent of liability to tubercular infection at this period. The conclusion suggested by the researches which Dr. WOODHEAD has carried on with Dr. MACFADYEAN, upon milk and tuberculosis in cattle, is obvious: it enforces the demand for the most rigid systematic inspection of dairies, as well as the homely precept of boiling milk before consumption.

The second lecture dealt with pulmonary tuberculosis, especially in children, and showed how the root principles adopted in the definition applied here also. It contained many suggestive and interesting facts, and we may hope that Dr. WOODHEAD will at no distant date think fit to publish his views in detail, since they constitute some of the strongest arguments in support of the bacillary doctrine of tuberculosis as applied to the human subject which have hitherto been enunciated.

WE have at various times discussed the attitude most befitting the profession regarding the strife of political parties, and we have endeavoured to point out and emphasise the weighty reasons which exist for dissuading the practitioner from ever assuming the *rôle* of the mere party politician. To these opinions we adhere, and as the subject is always one of practical moment, we may perhaps recur to it with advantage at the present juncture. Politics seem unhappily to become daily more envenomed, and the public arena threatens at times to be monopolised by a strife in which great principles are lost amid the din of party and of faction. If ever there was a time when an attitude of dignified reserve towards politics were desirable on the part of the medical profession as a body, surely that time is now.

It may fairly be asked at the outset why should not

medical men engage in politics? Is not an intelligent interest in public affairs incumbent upon every thinking man? Would not indifference to contemporary struggles, which do much to mould national destiny and influence national happiness, justly bear the aspect of criminal apathy? To these questions one answer only can be given, but it is one of which the absolute sufficiency will, we are confident, commend itself more and more to the most observant and reflective members of our fraternity. That answer is—that the practitioner of medicine has voluntarily assumed a function as important and as responsible as can fall to the lot of man, that this function is of itself sufficient to absorb his best energies, that its due discharge involves certain sacrifices—some of them great, all of them obligatory,—and that of these sacrifices one is the renunciation of active participation in the ordinary struggles of political parties. We are quite aware that all our brethren do not recognise or practise this renunciation, but we are profoundly convinced that the more the question is carefully contemplated, the more apparent becomes its wisdom—nay, its imperative necessity. The medical man cannot safely become a party advocate without compromising his position as a trusted adviser on whose absolute honesty and *bona fides* no one should be able to cast the faintest breath of suspicion. Our profession rests for its position upon the confidence of the public—a confidence which is justified by the records of the past, but which would be irretrievably shattered by the dissemination of the idea that medical men could under any pressure be so forgetful of their high responsibilities as to use any knowledge entrusted to them, or any power derived from that knowledge, for the furtherance of mere party tactics. We need not mince words, or ignore the fact so universally and so sorrowfully admitted, that partisan conflicts are conducted on the principle of asking and giving no quarter. It used to be said that "all is fair in love and war"; now we are accustomed to witness the practice, if not the avowed inculcation, of the principle that anything is justifiable in politics. Responsible leaders deplore their inability to control the zeal of the rank and file. Any weapon is supposed to be good enough for fighting the battle of the political champion, and the orator who appeals most to the lowest instincts of the mob is surest of an enthusiastic reception. The medical man may enter the political arena with the purest of motives, and may scorn as the basest of suggestions the idea that he should ever use his professional privileges for party purposes; but when he is in the thick of the conflict, with the smoke and the din of battle around him, when the issue hangs in the balance, he would be more than human if he did not sometimes snatch at any weapon which promised him a good hope of victory. Here, as elsewhere, the only safe rule is to keep out of the way of temptation. The man who breaks the seal of professional secrecy does not, it is true, violate any oath, but he is not on that account the less deeply perjured. He wrongs his patient, betrays his brethren, and indelibly soils his own conscience.

Even if medical men were wholly incapable of ever debasing their peculiar privileges to party ends, the possibility of a suspicion that they might conceivably do so would be an ample justification for an attitude of reserve towards politics. DARWIN, in his autobiography, attributes the great success of his father in medical practice mainly to his capacity for inspiring confidence, and we feel sure that nothing is more essential to the medical man than the reputation of being worthy of trust. An ardent politician may be worthy of trust, but the trust is usually limited to his own party. The medical man who consorts with eager partisans will be likely to share sooner or later in the distrust which such individuals invariably excite.

Not only is the trust of the public in medical men likely to be shaken by their adoption of the *rôle* of party politicians; respect will also suffer. Keen observers of affairs will, we think, confirm our belief that while party leaders will employ any instruments likely to be useful, they are not without a certain tinge of secret contempt for such privileged men as doctors or clergymen who condescend to adopt their shibboleths and imitate their tactics. This we have repeatedly observed, and its significance is great. Probably the public, whose instinctive judgments are often right, in despising the medical politician are unconsciously influenced by the following considerations: first, that the medical man in busy practice can devote much time and labour to politics only at the expense of the interests of his patients; secondly, that the man of truly scientific tastes and training can hardly feel himself much at home in the atmosphere of political turmoil; thirdly, that party service being the necessary condition to many kinds of preferment, the medical man who enters that service may possibly be only a place-hunter in disguise. We pause for a moment to say a few words on the second of these considerations.

The man of science seeks truth, and truth only. He observes, reflects, and reasons always with the sole view of detecting and explaining the order of nature. In so far as he is true to his profession, he seeks the fact, whether the fact be to his advantage or his hurt; whether it fits in with his favourite theories, or is subversive of them; whether it promotes his chief end in life, or is a fatal hindrance to it. Can any attitude be more diametrically opposed to that of the average politician? Further, the man of science knows that many of the hopes and fears of the party leader are alike vain. The politician cries, "Lo, here," or "Lo, there"—in the ballot, in religious equality, in free education, in a revision of land tenure—is national salvation. The man of science by no means ignores the importance of these or kindred reforms, but he knows that no single reform, however far-reaching, can regenerate his fellow-men, or be more than one little step onward. The political partisan, with his pet recipe for the ills of the commonwealth in his pocket, may masquerade upon the stage of parliamentary life, but there is no place for him in the domain of science. Hence, we conclude that the scientific spirit and the partisan spirit are incompatible, and that no individual can cultivate one without damage to the other.

There is still a further reason—and that, perhaps, the most weighty of all—for recommending the position we are maintaining. There is a large and vitally important class of questions comprised under the title of public health regarding which medical men should occupy the position of an impartial jury of experts. These questions are connected more or less closely with party politics, and if our medical brethren become partisans their opinions upon such

problems are *ipso facto* incurably tainted with suspicion. It is, in fact, only on condition of withdrawing from the ordinary conflicts of party that medical men will be permitted without demur to exercise the influence which their special training and experience should enable them to exercise in a field that is certainly not less fruitful than that of partisan warfare. This may or may not be just, but few will deny that such is the prevailing feeling on the part of the public.

We need hardly say that we are no advocates of medical men shutting their eyes to passing events, and declining to form any opinions upon the problems of the day. By all means let them form and retain their opinions, and give expression to them at the ballot-box. We deprecate only participation in party strife, and thick-and-thin adhesion to party leaders and party war-cries. While we regard this *rôle* of dignified reserve towards politics as incumbent upon the practitioner for his own sake, for the sake of the credit and influence of his profession, and, above all, for the public weal, we do not deny that certain contingencies may arise demanding from us a more energetic attitude. We feel sure, however, that it will be best to reserve such interpositions for occasions in which either the physical or moral well-being of the community is in serious jeopardy, and in which, therefore, the influence of the profession can be exerted with full and beneficial effect.

IF we are to believe some people, or to yield to our own occasional despondency over acts of members of the profession which jar with the sense of what is called for by professional usage, we might think that the age of medical ethics was gone. Even in the higher regions of practice we sometimes see methods and airs and assumptions of superiority which bring the profession into discredit. And in the lower spheres of practice it cannot be denied that a fierce competition exists, arising from an undue rush of members into the profession, many of whom cannot wait to achieve success by slow and ordinary means, but make their merits known by handbills and other forms of advertisement. Some of the great corporations of the profession have allowed their ethical functions almost to fail from disuse. They have come to act as if their only duty to the profession was to give diplomas, and, after receiving the fees of the young diplomate, they dismiss him into space as if they had no more interest in him or in his conduct. We are grateful for anything that reminds us that we are members of a profession under peculiar obligations to act on "determinate principles." We have before us an address to the Manchester Medico-Ethical Association, delivered by its President, Dr. HENRY SIMPSON, which shows that the ethical sense is still alive in Manchester at least. Dr. SIMPSON traces the origin of this Association, which has done so much to formulate a sound code of ethics, which has been so approved, almost word for word, by a certain branch of another association as to be bodily adopted by it with very scanty recognition of its source. At least so Dr. SIMPSON complains. It seems natural that Manchester should speak with some responsibility in medical ethics, for was it not from Manchester that Dr. PERCIVAL wrote his classical book on this great subject, in the dedication of which, to his son, he said that the relations in which a physician stands to his patients, to his brethren, and to the public were complicated and multifarious, involving much knowledge of human nature and extensive moral duties. It is no slight credit to Manchester that it has sustained its authority on this subject, and that so many of the profession of this city are imbued with the spirit which Dr. PERCIVAL breathed in every line of his book. Dr. SIMPSON amply justifies the origin and uses of the Society. He shows that the Association has for upwards of forty years discussed nearly all the nice questions that arise between medical men and their patients, or between medical men and their brethren, or between medical men and the State, and various local authorities, and he declares that there is an immunity from professional feuds and quarrels which some more pretentious places do not enjoy. The example of Manchester might be imitated. Very much good would be done by the multiplication of such associations, where medical men might amicably discuss delicate questions of behaviour or of practice, and where the mere exchange of sentiments and explanations would often dispel suspicions and other feelings inimical to mutual respect and neighbourliness.

No change in the conditions of society, or in the circumstances of the profession, can make the consideration of ethical questions superfluous. There are many subtle influences in modern society that tend to demoralise medical men, and to render them less amenable to the judgment of their brethren, which is, after all, the ultimate court of appeal. Prosperity may overtake them as a flood from a mere accident of practice or the favour of men who command newspapers or who lead society. Possibly, they may be quite innocent and free from responsibility for such accidents. They may have done nothing to provoke or invite such doubtful praise. One member of our profession has lately been the victim of such cruel laudation very thickly laid on. We will not pain him by giving his name, for we are sure that he derives no pleasure from such notices. Let us imagine the torture that a man like Sir THOMAS WATSON or Dr. ALISON would have felt had they seen in a fashionable print such lines as this applied to themselves: "It can scarcely be regarded as in any sense a disparagement of Dr. —— to say that he is *par excellence* the physician of society. It is among the socially eminent—those distinguished by rank, or fortune, or ability, or by two or all three of these attributes—that his practice lies. His patients are peers and peeresses, millionaires and millionairesses, the pillars of the State, the fathers of the Church, the sages of the law, the ornaments of the Army and Navy, the celebrities of literature and art, the votaries of pleasure and fashion." We can only offer our condolence to the subject of such flunkeyism as this, and be thankful that it is so rare. No medical ethical association and no medical corporation can call the editor of a paper to account. But regard for his friend might have restrained his facile pen. And it is to be hoped that the friend himself will be his censor, and will make him clearly understand that the true praise of a medical man is that of his peers. London is not the only place where medical men are exposed to this deleterious influence; but it is a veritable evil, against which every man who respects himself and his

profession will set himself, and invoke all the modest sentiment of himself and his profession.

THE total abstainers have been thrown into commotion by the publication of certain statistics—published, under the direction of Dr. ISAMBARD OWEN, by the Collective Investigation Committee of the British Medical Association—purporting to show that abstainers, after all, do not live so long as other people. This is a terrible reversal of statements enforced with much show of truth by the teetotallers, and based on the experience of insurance offices, which divide their lives into abstaining and non-abstaining classes, and find this as the rough result—that the actual claims in the *abstaining* section are, on the average, only 75 of those expected; whereas in the general section (including all classes of drinkers) the actual claims are an average of 98 per cent., or a difference of 23 per cent. in favour of the teetotal section. The Investigation Committee asked the members of the Association to give certain returns as to the connexion of disease and intemperance, based on a study of the counterfoils of the death certificates for the preceding three years. It is unsatisfactory to find that only 178 returns were made; these gave the returns of 4234 deaths. The classification of drinkers was highly complicated, especially considering that those who supplied the information had only to depend for the facts of each case on memory and the counterfoils of the death certificate for three years past. The classification and the age at death are given below. We should premise that only males dying above twenty-five years of age are included. Of these, less than 3 per cent. were abstainers, 42 per cent. habitually moderate, 25 per cent. were careless, and 30 per cent. more or less distinctly intemperate (one-half of these latter being decidedly so). Here is the alleged achievement of these classes in the attainment of longevity. The figures give the average age at death:—

	Years.
Abstainers	51·22
Habitually temperate	62·13
Careless drinkers	59·67
Free drinkers	57·59
Decidedly intemperate	52·03

No wonder that the teetotallers refuse to accept such statistics. It may still be believed that really temperate people, who take their alcohol with extreme moderation, fare better and live longer than those who absolutely abstain. Many men of great authority and judgment think so. But it can scarcely be credited that the decidedly intemperate live longer than teetotallers, and that free drinkers and careless drinkers live much longer. Such conclusions raise the strongest suspicion of the value of the statistics. We are sure Dr. ISAMBARD OWEN would handle his materials with impartiality, but we cannot accept them as a serious contribution to a very interesting social and medical question. To expect medical men to say of a patient who died three years ago to which of five classes of drinker she belonged is to expect too much. "Careless drinkers" are thus defined: "They are neither intemperate nor free, yet do not confine themselves within a rigid rule, do not object to spirits occasionally as a beverage, at times drinking between meals, or even getting drunk occasionally, but not making either practice a habit, and on the average not materially exceeding the 'physiological amount' of one ounce and a half of pure alcohol daily." We decline to recognise such habits as fairly within the definition of temperance as sanctioned now by medical authorities, and we gravely suspect the figures which credit such men with a longevity of 8·45 years greater than that of abstainers, who have their faults and even their diseases, and who do die in spite of abstinence, but who certainly escape or "keep under" many diseases and degenerations which shorten and impair life. We arenot sorry that these statistics have been published. But we shall be sorry indeed if they lead men who drink "carelessly"—and they are to be numbered by millions—into thinking that they may do so with impunity. Unless medical experience and pathology are altogether unworthy of trust, that is an illusion.

Annotations.

"Ne quid nimis."

UNSEASONABLE WEATHER AND THE PUBLIC HEALTH.

THE popular conviction that seasonable weather—that is, the prevalence of arctic cold in winter and of tropical heat in summer—is conducive to health will probably long survive the most convincing statistical evidence of the fallacy on which it is based. It may be useful, however, to call attention to the apparent effect of the recent long-continued spell of unseasonable summer weather upon the public health, judged by the death-rate. During the six weeks ending last Saturday, the mean temperature at the Royal Observatory, Greenwich, was almost continuously below the average. If we except five days in June (the 11th, 12th, 24th, 25th, and 26th), a deficiency in the mean temperature was recorded on each of the forty-two days in this period. The average daily deficiency on these thirty-seven days of low temperature was no less than 5·2° F., the coldest days being the 11th and 12th of July, when the deficiency was no less than 14·0° and 13·4°. The frequency and amount of rainfall during this period were almost as remarkable as the low temperature. Rain was measured on twenty-seven of the forty-two days in this period of six weeks to the aggregate amount of 6·13 inches, being almost identical with the amount measured this year previously to the six weeks under notice. Let us now consider what has been the death-rate in our largest English towns reported by the Registrar-General during this unseasonably, and probably unprecedentedly, cold and wet period. In the twenty-eight large English towns dealt with in the Registrar-General's weekly return the annual death-rate in the six weeks now under notice was equal to 15·7 per 1000 of the estimated population, a rate very far below any previously recorded during this period; the mean rate in the corresponding period of the six preceding years 1882–87 was 19·3, and exceeded by 3·6 the rate in the six weeks ending last Saturday. A very considerable proportion of this marked reduction in the recent death-rate of our largest towns was naturally due to the small recorded mortality from diarrhœa; the deaths from this cause in the twenty-eight towns in the three weeks ending last Saturday were but 330, against 860, 1138, and 1563 in the corresponding three weeks of the three years 1885-6-7. Summer diarrhœa, however, is almost exclusively an infantile disease, and we find that the reduction in the death-rate has by no means been confined to the deaths of infants. The deaths of persons aged between one and

sixty years has also showed a marked decline, due in great measure to the low death-rate of zymotic diseases among children; and even the deaths of elderly persons have been considerably below the corrected average. From the above-mentioned facts it is, at any rate, patent that the recent cold, wet, and sunless weather cannot have unfavourably affected the public health, even if we hesitate to affirm that the low death-rate has been due to the prevalence of such exceptionally unseasonable weather.

DEATHS OF CHILDREN AND LIFE INSURANCE.

BEFORE the Lords Committee on Poor-law Relief Mr. Waugh, the honorary secretary of the Society for the Prevention of Cruelty to Children, expressed his belief that as many as 1000 children are annually murdered in England for the sake of the money for which their lives have been insured. As the an evening contemporary remarks, it would be more proper to state that their deaths rather than their lives have been insured. The same paper suggests that while the estimate is, it is to be hoped, an exaggerated one, the Society named has but too good reason to know that there is a good deal of truth in it. We have also too much reason to believe that the statement is not exaggerated in the least. Murder may be, and is, caused by omission, quite as much and as wilfully as by commission. Those who know the persistent way in which many children are from their birth upwards systematically neglected and allowed to shift for themselves, will realise the old saying that "there is a Providence over babies and drunken men." But for this Providence and the tenacity of child life, the mortality among children would be much greater. Many children are wilfully allowed to die from want of proper care, from improper food, and other perfectly preventable causes. It would be interesting to know whether the insurances of infants' lives are profitable or the reverse to the insurance societies, and it is to be hoped that the inquiry now being made into friendly societies may throw some light upon this.

PELVIC CELLULITIS IN THE MALE SUBJECT.

DR. SKJELDRUP describes in the *Tidsskift for Praktisk Medicin*, the organ of the Norwegian Medical Association, a case, in a gentleman fifty years of age, which he diagnosed as pelvic cellulitis. The symptoms at first were vomiting, flatulence, constipation, abdominal tenderness, and tympanites, with pain over the cæcum, where there was some resistance on palpation and dulness on percussion. Rectal examination disclosed a tolerably hard tumour, which could be felt on bimanual examination to be situated in the left hypogastrium. An aperient powder was given, and quinine and iodide of potassium ordered five times a day, wet compresses being applied over the abdomen for some days. The patient's condition did not improve, the distension of the abdomen and the pain becoming greater, and the difficulty of passing flatus or fæces increasing; besides this, the patient was becoming more and more emaciated. With considerable difficulty an œsophagus tube was passed up to the sigmoid flexure, and was much bent by the tumour, which displaced the gut backwards; through this a warm injection was given, producing a scanty stool. Two days later the injection was repeated, a copious evacuation of very foul fæces resulting. After this the patient began to improve, and after a few more injections he was able to pass his stools naturally. At the end of a month there was only a slight amount of what felt like infiltration on the anterior aspect of the rectum to be detected. The diagnosis was one of considerable difficulty. The consistence of the tumour could not be satisfactorily made out, but sometimes it appeared to be firm, elastic, and somewhat tender. It was of an irregular shape, with no clearly defined limits. It was at first diagnosed by two medical men as a neoplasm of rapid growth; but the favourable termination shows that this was incorrect; so that, notwithstanding the rarity of pelvic cellulitis in a man, this seems to Dr. Skjeldrup the most probable explanation of the case. A case reported by Dr. Muir of Selkirk in 1885 is quoted by Dr. Skjeldrup as showing that cellulitis does sometimes occur in the pelvis of the male subject.

POLICE CELLS.

FROM time to time complaints are made regarding the accommodation made for prisoners who are to be brought before the magistrates or who are brought into court during the progress of their trial. It is important, however, in these cases to distinguish between those in which the accused is merely detained by the police and those in which the prisoner is brought for trial, also to keep in view the arrangements that subsist in different towns throughout the kingdom. As far as the police cells of the metropolis are concerned, we have reason to assume that no substantial objection can be urged against them generally. As far back as 1873, at a time when a considerable outcry was made against the management and arrangement of the police cells in the metropolis, we appointed a special commission to investigate into the alleged deficiencies. The result proved on the whole satisfactory. The report issued by THE LANCET on that occasion showed that the statements then made with respect to the bad condition of the London police cells were without substantial foundation. Nevertheless we have had occasion to point out that, however satisfactory the metropolitan arrangements may be for prisoners casually detained, they do not obtain in all towns, and that the accommodation afforded to prisoners when brought to the court both in the metropolis and in provincial towns is often disgracefully deficient. We have shown that, in some instances, when prisoners are awaiting their trial they are brought up day after day, and are incarcerated for long hours in the foulest dens and closets in the purlieus of the court, or else herded together in rooms in which the most ordinary sanitary requirements are neglected, and, even if provided, are of the most primitive kind, and often have to be used in view of the other prisoners. The whole question of the accommodation of prisoners brought up for trial requires reconsideration and reformation. It is anomalous that the drunken ruffian should be lodged in a well-aired, convenient police cell, whilst an innocent prisoner has, perhaps, to spend days in some miserable closet, in foul air and amid filthy surroundings, till his turn for trial comes on.

A REMEDY FOR SLEEPLESSNESS.

IT would be remarkable in the highest degree if an ailment so general as sleeplessness had not long ago found its duly authenticated panaceas. Friendly hints to fellow-sufferers will never be wanting on the part of a happy minority who have, by means of one or other method of relief, triumphed over this formidable evil. We cannot wish it were otherwise. The suggestions of experience are always worth noting, and are usually instructive. When they come to deliver us from the unrest of an anxious or excited brain, they can only be greeted with grateful respect. It is in such a spirit that we now proceed to discuss the remedy which is explained below. The latest proposition which comes to compete with older formulæ in this beneficent work is founded on the theory that the two cerebral hemispheres have different functions, the left being employed in intelligent thinking, the right in "unconscious cerebration," including the composition of dreams. Proceeding on this assumption (for it still is at

best a physiological suggestion), the author of the new method no longer uses the well-worn practices of calculation, repetition, and the like, which he formerly adhered to. Now he merely sets himself to think over the details of a dream, the more recent the better, and he finds that in the process his drowsy right intellect overshadows (if the phrase is permissible) his waking left, and sleep is the result. We will not vouch for the correctness of this reasoning, however striking it may appear in its ideality and suggestiveness. A logical opponent might as truly argue that so marked a division of the cerebral functions is unsupported by any adequate proof. He might also say that, even if it were demonstrable, the dream-thinking process implies a brotherly concern of the waking hemisphere in the sleepy business of its fellow. We should rather put it thus: that the very effort to revive a dream implies a concentration of the mental function within the dreamer's mind, and a withdrawal from all outward and inward realities. This withdrawal is the one great essential to sleep. It is on this ground that the author of the method in question must found its efficacy, if he would measure his theory by his proof. However this may be, it is worth noting that the results claimed for his plan are confirmed by the independent testimony of another sufferer.

RETENTION OF THE PLACENTA FOR SEVEN WEEKS.

DR. VARNEK, writing in the *Vrach* on the question of the management of retained placenta, mentions a case which occurred under his charge in the Basman department of the Moscow Artisan Hospital, which he thinks shows that, even where the placenta is found tightly locked up in the uterus several days or weeks after labour, there need be no necessity for recourse to such serious measures as were adopted by Schultze, who in a similar case performed abdominal section and extirpated the uterus. Dr. Varnek's patient was a married woman, and had been attended by a midwife, who, after a great deal of very painful intra-uterine manipulation, had assured her that she had got the whole of the after-birth away. The patient attempted, after the sixth day, to attend to her household duties. She was, however, very weak, and, as she grew worse and began to suffer from pain in the abdomen and back, she sought admission a fortnight after the confinement under Dr. Varnek. She was found to be in a low, weak, anæmic state. The abdominal walls were lax. The uterus could be felt as a dense hard mass, extending up to the umbilicus. The external os admitted the finger, but the internal os was much too contracted to permit the cavity to be entered. There was but little discharge, and this was inoffensive. The patient was treated by warm vaginal injections of carbolised water (1 in 50), iodoform suppositories, and the internal administration of ergot and ergotine. The condition improved slightly for a time, but in about a month from the time of confinement hæmorrhage occurred, the temperature (which had been normal) rose, and shortly afterwards the discharge became very offensive. Attempts were then made to examine and clear the uterine cavity. The internal os having somewhat dilated, a partial exploration was made, which revealed the presence of the placenta in a very hard dense condition, firmly attached to the uterine walls. Persistent efforts both with the fingers and with a sharp curette failing to remove it, and the patient being much exhausted by the manipulation for which she had been placed on the operating table, she was put back to bed, and prolonged irrigation with a 1 per cent. solution of carbolic acid ordered, a mixture of iodoform and glycerine having been first applied to the interior of the uterus. For the next few days irrigation was practised for from four to ten hours daily, the general condition improving. In a little more than a week a portion of the after-birth came away, which was entirely inoffensive, and the next day the whole of the remainder was got rid of. After this the patient made a rapid and complete recovery. Here the placenta had remained in the uterus fifty days after the confinement, and its ultimate removal is attributed by Dr. Varnek mainly, if not entirely, to persistent and prolonged irrigation.

BURIAL REFORM AND THE PROPOSED GOVERNMENT INQUIRY INTO CEMETERIES.

RESOLUTIONS have been carried at several recent meetings urging the Government to institute an inquiry into the present condition of our cemeteries. In the interests of the public health we trust that such an inquiry will be held by a Royal Commission. Forty years ago the public were scandalised by the description of our churchyards, more particularly those of London and the larger towns. Since then intra-mural churchyards have been closed, and most towns and cities possess suburban cemeteries of ample extent, more or less efficiently managed. Unfortunately, our cemeteries have been formed under various Acts of Parliament, the provisions of which are not uniform. We all know that history repeats itself, and that human nature is the same in all ages. It would be contrary to all experience to expect Acts of Parliament and Orders in Council to be always scrupulously regarded by the class of men whence gravediggers and other cemetery officials come; and from what has lately been published in THE LANCET, it is quite clear that "pit burial," the most objectionable of all forms of burial, has been revived of late in Scotland and elsewhere. It is of the greatest importance to the public health that the dead should be buried in such a manner as to render noxious exhalations from them absolutely impossible. This can only be ensured by burial in a sufficient depth of suitable soil, and by the most strict observance of all necessary regulations as to the closing and reopening of graves. We trust, therefore, that an inquiry will soon be held, and that the commissioners will comprise a due proportion of members of the medical profession. There are medical practitioners, both retired and acting, who, having in past years been induced from their experience to pay great attention to the subject of burial, would be able to give valuable assistance.

A MOSCOW LYING-IN HOSPITAL.

DR. INOEFFS, whose report on the work done in the Golitsinski Lying-in Hospital in Moscow in 1886 was mentioned in THE LANCET of May 7th, 1887, under the heading of "Antiseptic Midwifery," has now published a report of the work of the institution for the year 1887, from which we learn that the same excellent results continue to be obtained. Two new rooms have been added to the hospital, thus increasing its accommodation. The number of labours taking place in the hospital during the year was 756, including twelve abortions. There were twelve cases of twins and one triple birth. Of the 758 children, 383 were boys and 375 girls, the numbers of the two sexes being much more nearly equal than usual, the ratio being that of 100 to 102. There were three maternal deaths, due respectively to rupture of the uterus in a patient suffering from relapsing fever, eclampsia, and tuberculosis. The forceps were applied twenty-two times—i.e., about one case in thirty-four. Craniotomy was performed three times; premature labour was induced twice; episiotomy (perineal incisions) four times. The perineum was sutured fifty-six times; in forty-four of these cases complete union was obtained. By the employment of Credé's prophylactic measures not a single case of purulent ophthalmia occurred, and simple conjunctivitis was only present in four cases. Detailed notes are given of

interesting cases and elaborate tables of statistics. The whole report has a statistical completeness which is very usual in Russian official documents, but which is not to be found in any report of lying-in institutions in this country, most of which, indeed, are managed on such different principles from the large foreign hospitals that reports of the same character could hardly be constructed from the materials in the possession of the medical officers.

THE VAGARIES OF FASHION.

WOMEN of the present day have reason to congratulate themselves that the high and pointed French heel, with its obviously deforming tendency, has not now that assured predominance in fashion which once belonged to it. For a change so beneficial we may probably thank more than one reforming influence which has been applied in this direction. The slowly acting force of instructed opinion has doubtless done its part. An increased knowledge of essential anatomical facts has also possibly had a certain effect. The most potent of all the operative agencies, however, would seem to have been a conversion, albeit not by any means disinterested or purely conscientious, of female taste and character to conformity with a more wholesome standard. This result has come about at the bidding of that powerful ally of health, rational amusement. It is to a widespread movement in favour of healthy athletic exercise, to the love of lawn-tennis, and the like, that we may trace the introduction of a fashion which admits that boots and shoes must fit the foot, and that the manufactured heel should occupy its natural position under that of its wearer. Still the old custom dies very slowly, and it would almost seem as if there had been of late a tendency towards its restoration. For it and for that other undesirable illusion—a tight fit—we can only wish a speedy, or at all events a sure, extinction. The manifest effect of both is of course inevitable distortion of the foot; and it is somewhat difficult to say to which form of mischief we must allow the "bad pre-eminence" in this respect. We need hardly now do more than mention the ruinous effect of a peg-like heel so placed as to force up the bones of the instep, while the weight of the body falls forward on the toes, the calf is strained, the spine abnormally curved, and the pelvic viscera tend to undergo a corresponding and injurious flexion. Yet these are but the mere consequences of this pernicious custom. While it prevails, exercise in its proper sense is hopeless and physical development a fallacy. We therefore hail the advent of the athletic era; and we would again strongly urge every woman and girl of taste and judgment to abandon a habit in dress which must cripple her movements and cannot possibly add to her attractiveness. Then again the inventor of the ladies' hat of the period seems to have done his best to produce a covering for the head which should expose the nape of the neck as much as possible to the rays of the sun. It is true there has not been much sunshine this year, but we may have it yet, and then perhaps the inconvenience of the present fashion may become more apparent. A well-known authority has told us how sunstroke is often attributed to the wearing of the forage cap in the army; and possibly some minor troubles, such as occipital headache, may be traceable to the cause we have hinted at. We are quite aware that it is hopeless to attempt to overcome the dictates of the milliner, and that tight lacing, high-heeled boots, and dragging up the back hair will hold their own as long as they are "in the fashion"; but at this season of the year, when so many resort to the seaside for health, surely it is reasonable to suggest that women as well as men should endeavour to get as much good and as little harm as possible from their holiday trip.

COMMUNICABILITY OF ACTINOMYCOSIS.

SINCE Dr. Israel first described actinomycosis in 1878, there have been, according to Dr. Baracz of Lemberg, 103 cases published. Dr. Baracz himself has met with two cases which apparently show that there is a possibility of the affection being communicated from one person to another. The first to be affected was a livery-stable keeper. His horses were all, however, in good health, and he had not had charge of any strange horses. When seen by Dr. Baracz on Jan. 9th, 1887, a tumour was found on the external surface of the left ramus of the lower jaw; it was about the size of a walnut, fluctuating, easily movable over the bone, and presented an indurated border; the skin over it was inflamed; the teeth were much decayed and very black. Two incisions were made into the tumour, and it was proposed to scrape it thoroughly out. To this, however, the patient refused his consent. The contents on microscopical examination proved to be, as was suspected from the first, of an actinomycotic nature. The wounds were dressed with iodoform, and had quite healed on March 3rd. On July 15th the *fiancée* of the former patient presented herself with an abscess of the alveolar process of the left jaw. Behind the abscess was a somewhat tender, hard tumour, the size of a hen's egg, but flattened, intimately connected with the inferior maxilla. Many of the teeth were gone, and those that remained were very defective. On opening the abscess, half a teaspoonful of pus was obtained, from the examination of which a diagnosis of actinomycosis was established. The wound healed readily. Two months later, a second abscess, the size of a hazel-nut, was found in the gum over the first molar, which was carious. This, as the patient refused to allow it to be opened, broke and ultimately healed without trouble. As there was no microscopical examination of the contents of the second abscess in the case of the young woman, it cannot be regarded as certain that this was of a parasitic nature.

NATIONAL VETERINARY ASSOCIATION.

THE first of the annual scientific gatherings, which have now become so marked a feature of modern life, has been the sixth meeting of the National Veterinary Association, which took place at Newcastle on the 17th inst. and following days. The President, Professor W. Williams, gave an address, in which, after alluding to the deaths of Professor Robertson and Mr. Hartley, he proceeded to make some wise comments upon the evil of competition among members of the veterinary profession in large cities, and the no less serious evil of the growing practice of communications on veterinary subjects to the public press by members of the profession, who thus "overstepped the line of professional propriety, possibly inflicting serious damage upon those who were guided by them, and undoubtedly committing a serious offence against those members of the profession who, by its legitimate exercise, had to maintain themselves in a position of respectability." He next addressed himself to the progress in knowledge of recent years, and amongst other matters expressed his regret that the Government had not instituted further inquiry into the utility of preventing pleuro-pneumonia by protective inoculation before determining upon wholesale slaughter as the only remedy. As to tuberculosis, he considered that before all so-called tuberculous animals were condemned as unfit for human food a better understanding should be arrived at as to the nature of true tuberculosis. In conclusion, he contrasted the different standpoints of the medical man and the veterinarian, for whereas the former was concerned with the relief of suffering and the prolongation of life, the latter had to restore their patients to a condition in which they could be again fitted for work. A paper was read by Mr. Armstrong, medical

officer of health for the city of Newcastle, on the "Importance of the Study of Comparative Pathology," in which he related particulars of a limited but fatal epidemic of scarlet fever in 1879, undoubtedly due to milk, which could not be proved to have been contaminated after it had left the cow. In the present year he investigated another but milder outbreak of this disease, in which again there was strong suspicion of its being directly derived from the cow. He also referred to other ways in which milk might be contaminated and rendered unfit for consumption. The discussion was opened by Dr. Fleming, and in the course of it Mr. Clement Stephenson said that it had been too much the fashion for medical men, particularly medical officers, when there had been an outbreak of scarlet fever, to run directly to the cow, instead of, in the first place, making quite sure that there was no other source of infection. Prof. Walley said he had never seen anything in a cow identical with scarlet fever in man. Prof. McFadyean stated, as the result of his experiments, that he had always failed to excite in animals after inoculation a single symptom like scarlet fever.

THE CONTROL OF INFECTION IN BOLTON.

WE learn that great dissatisfaction has been caused among the workpeople in Bolton by the action of the sanitary inspectors in prohibiting persons from following their occupations when they have infectious diseases prevalent in their homes, and that the local United Trades' Council has decided to take the matter up by instituting a prosecution with a view of testing this right, and also to secure compensation for those who have experienced loss in consequence. It is, of course, well known that there is absolutely no such right under the provisions of the Public Health Act, it having been arranged under that and previous statutes that only persons and things actually infected can be dealt with; the former by isolation in hospital, and the latter by disinfection, or by destruction if compensation is awarded for the articles destroyed. But, under certain local Acts, powers in excess of this have been granted to sanitary authorities, and the system of procuring special powers for special places has more than once led to very awkward results. If such powers exist in Bolton they ought certainly to be supplemented by a provision to grant compensation to those who are affected; for if the public health is to be protected by the imposition of disabilities on the people, the public purse should pay the cost of it. We are, however, inclined to believe that such powers are, as a rule, unnecessary. Where a sanitary authority receives infected persons into a properly constructed isolation hospital at the public cost, there is rarely any necessity to interfere with the relatives of the sick. Where a sanitary authority, who have erected such a hospital out of the public funds, and maintain it in the same way, and yet endeavour to make the same public who provided it pay for the use of it, its principal object is very commonly defeated; discontent becomes general, and the public are disinclined to resort to it. We do not profess to know the circumstances that prevail in Bolton in this respect, but it is significant that amongst the complaints made is one to the effect that persons not chargeable to the poor-rates are compelled to enter the workhouse infectious hospital. There are cases where the general hospital provided out of the public rates is kept for paying patients only, and an attempt is made to thrust others into the workhouse. This proceeding is illegal, and it also defeats its object, for people at last refuse to be pauperised merely to protect their fellows from infection. Bolton has long taken a lead in attempting to control infectious diseases, and we trust that no measures are now being adopted in the borough which will tend to injure the cause which the Corporation have at heart.

A SPANISH PHYSICIAN ON POSTURE IN LABOUR.

DR. FRANCISCO ALONSO RUBIO, in a paper read before the recent Spanish Gynæcological Congress, laid great stress upon the important part that the posture of the patient plays during labour, both physiological and abnormal. During the first stage, he merely keeps the patient from going from one room to another, to avoid catching cold. During the expulsive stage, though he prefers the supine, or at least a horizontal, position as a rule, he changes it to a sitting posture where there is asthma or cardiac weakness, also where the pains have become inert through uterine fatigue. Where there is any version of the uterus, it is necessary to pay due regard to its direction. Thus, if there is anteversion, the patient should be placed on her back; if there is lateral version, she should lie on the side opposite that to which the fundus uteri is inclined, so as to bring the fœtal axis to coincide as nearly as possible with that of the pelvis. It is of course a recognised fact that a change of posture will frequently facilitate the descent of the head even when there is no abnormality either in the position of the child or of the direction of the uterine axis. When the fœtal position is transverse, the patient should be laid on the side opposite to that occupied by the head, with a pillow under the abdomen. The adoption of the genu-pectoral position has frequently been found of service by Dr. Rubio. When there is prolapse of the cord, and it is being dragged upon in a dangerous manner, he raises it above the head and keeps it there during several pains, the woman being placed in the genu-pectoral position. Again, in complicated presentations, he has found this the best posture for their reduction, and in arm and shoulder presentations, where the amniotic liquid has escaped, and the practitioner in attendance has been unable to insert his hand and turn, Dr. Rubio, by the adoption of this position, has found it possible to execute the necessary manœuvre.

ARSENICAL DYES IN DRAPERY.

IN spite of many warnings impressed by precept and experience, arsenical pigments continue to be used in house decoration and to injure health as heretofore. A typical example of poisoning due to this cause is reported to have occurred quite lately in the Civil Engineering College at Cooper's Hill. The facts related are the following. Some of the students, with an eye for the beautiful, had, it appears, adorned their apartments with cretonnes and Indian muslins of great brilliancy. About the same time a singular epidemic became prevalent in the establishment, and was attended with the irritable condition of the alimentary tract and other symptoms characteristic of the action of an irritant poison suspended in the atmosphere. The presence of arsenic was naturally suspected, but the wall-papers did not contain it. The cretonne and muslin decorations, however, were found on examination to be highly arsenical, and one piece, it is said, contained rather more than nineteen grains of this poison in the square yard. Here then was the source of an otherwise inexplicable state of general ill-health which had been observed among the students for a year past. Happily the cause at work was detected before any fatal consequences had occurred, and probably a liberal allowance of exercise in the open air had much to do with this result. The lesson taught by this occurrence is not a new one. It merely rehearses the characters of a once familiar danger, and shows that it still exists. The public must therefore now decide whether it will, in the face of such practical instruction as this, continue to choose articles of dress or household wear with regard to custom or to their cheap attractiveness alone, and without a ques-

tion as to quality. Nor would we warn purchasers to be chary only of the more gaudy hues, for even such colours as black and dark blue are frequently unsafe. Arsenic is no doubt the ingredient most to be avoided, but it should be remembered also that aniline dyes have often proved injurious. It appears likely, indeed, that this is to some extent a consequence of the fact that arsenic is freely used in their manufacture.

PHYSIOLOGICAL EFFECTS OF RUSSIAN BATHS.

DR. NIKOLAI MAKOVETSKI, of Professor Manassein's clinic in St. Petersburg, has published as a graduation thesis an elaborate investigation made by him on the effect of the so-called Russian bath on nitrogenous metabolism, and on the assimilation of fat and the nitrogenous principles of food. His researches were carried out on four student friends in a condition of perfect health. The baths were given daily for five days; perspiration in a hot chamber was induced, with the usual amount of shampooing, no steam being used. Accurate analyses of the urine &c. were made for five days before the baths, for the five days during which they lasted, and for two days subsequently. It was found that the assimilation of the nitrogenous parts of the food was diminished, the nitrogenous metabolism being increased. The loss by the lungs and skin was markedly increased, but the urine was diminished; the uric acid, too, was diminished during the days when the baths were given. The baths have the effect of strengthening the muscular and nervous systems, and of increasing secretion when there is much muscular work, especially where the food is deficient in nitrogen, when there is a large amount of nervous and mental activity, and also when there is deficient action of the secretory organs in consequence of preceding hypersecretion, or morbid conditions, such as chronic catarrh of the bronchi, stomach, intestines, or genito-urinary tract, chronic hepatic, renal, or splenic affections. In these cases, together with the baths, fat and hydrocarbons are required in the food. As contra-indications, theory would lead us to include all conditions where the nitrogenous metabolism is diminished, and also those where artificially induced diminution of it appears to act prejudicially.

OFFICIAL REPORT ON BACK-TO-BACK HOUSES.

AN important and voluminous report has just been issued by the Local Government Board on the subject of back-to-back houses. We have long contended against the principle of allowing dwelling-houses to be erected without a sufficiency of open space both to the rear and in front of them, and we are glad to note that the general tenour of the report is strongly adverse to a system of building which has been carried on a good deal in the north and in the midlands, and which, if persevered in, cannot fail to make urban life even more injurious than it already is. The report is by Dr. Barry and Mr. Gordon Smith, F.R.I.B.A., and we shall shortly review it somewhat in detail.

RECOVERY OF VISION BY LIGHTNING.

A REMARKABLE case of recovery of sight from exposure to a stroke of lightning has recently been published in the northern papers. The statement made is to the effect that a young collier named Adam Bate lost his vision in December last from the explosion of a charge of gunpowder, which utterly destroyed the right eye and caused a fracture of the frontal bone. The vision of the left eye was lost, apparently from shock to the retina, without other serious damage to the eye. On returning from Ettingshall in the midst of a severe thunderstorm, on the 16th inst., he remarked to his brother that he saw light through his spectacles, and immediately afterwards he experienced a piercing sensation which passed from the eye to the back of his head. The pain was brief, and he then found he was able to see indistinctly the objects near him. On the following day his sight had so far returned to him as to enable him to walk about the town without a guide. The improvement may be due to one of two circumstances. It is possible the original injury may have caused the lens to become opaque, and the shock of a sudden peal of thunder close to him may have displaced it into the vitreous; and, on the other hand, the paralysed retina and optic nerve may have been stimulated into renewed activity by a very vivid light, which would act like a strong electrical current on a partially paralysed motor nerve. It would be interesting to know whether the improvement in the vision is maintained.

PATHOLOGICAL SOCIETY OF LONDON.

IT has been decided by the Council to set aside two or more evenings before Christmas for the discussion of the Morbid Anatomy and Pathology of Chronic Alcoholism, and for the exhibition of specimens illustrating the subject. Dr. Payne has consented to open the debate. It is proposed that the subject should be discussed and specimens exhibited under the heads—(1) Effects of Alcohol on the Digestive System; (2) Effects of Alcohol on the Urinary System; (3) Effects of Alcohol on the Nervous System; (4) Effects of Alcohol on the Respiratory Organs; (5) Effects of Alcohol on the Skin or any other Organs.

GUY'S HOSPITAL.

THE medical staff of this hospital, with the consent and full assistance of the governors, have decided to build a residential college for the students. This will be erected on premises within the hospital precincts, on ground on which the first Nonconformist place of worship in London was situated. It is intended for the reception of sixty men, amongst which number will be included the resident staff of the hospital, the house surgeons, house physicians, and others, who will be in telephonic communication with the hospital buildings. Every convenience will be provided, and amongst other things a gymnasium will be included, for the use of the residents; this is as it should be. The building is calculated to cost £20,000, the whole of which has been already subscribed.

THE PREVENTION OF WOOLSORTERS' DISEASE.

THE Sanitary Committee of the Bradford Corporation have taken an important step in the direction of the regulation of woolcombers' premises with a view to prevent the occurrence of anthrax. Besides circulating amongst those concerned a copy of a presentment by a coroner's jury which recently inquired into a fatal case, together with precautionary regulations, the committee intends, if possible, to get the breach of the regulations made a penal offence. To limit such legislation to Bradford alone would obviously place the traders of that city at a disadvantage, so that, instead of proceeding by making a special bye-law, a draft letter has been prepared asking the Local Government Board to adopt regulations dealing with the matter which shall be applicable to the whole country, either by the powers conferred upon them by Section 134 of the Public Health Act or in any other way they may think fit. The breach of regulations made under this section renders the offender liable to a fine not exceeding £5; whereas the precautionary regulations supplied by the Corporation at the present time have no direct force in law, and, where they have not been observed, can only be called into play in case of a coroner's inquest as proof of neglect of reasonable precautions in the carrying on of a dangerous trade. Prevention

of the disease is, however, the aim desired; and it is noteworthy that in all the mills in Bradford where the precautionary regulations have been observed there has been an absence of woolsorters disease.

MALIGNANT PUSTULE.

AT an inquest held on the 20th inst. at Guy's Hospital, a carman, aged forty-seven years, was said to have died from blood-poisoning due to a vegetable parasite in the neck. This appears to have been a case in which no connexion could be found between the disease, charbon, or malignant pustule and the occupation of the patient, as in his work he does not appear to have had the handling of hides. The suggestion that the disease resulted from the man's drawing his hand across the back of his neck whilst in a condition of perspiration is a feasible one, or it may have resulted from his scratching a pimple in that situation. But the origin of the germ remains a mystery.

SCARLET FEVER AT POLLOKSHIELDS.

A SOMEWHAT extensive outbreak of scarlet fever, which by the middle of the month had already attacked seventy-four persons, has been traced in Pollokshields to the use of milk from a dairy where a milkmaid had been suffering from the disease. Drs. McMillan and Carmichael were satisfied as to the source of the infection, and, as the result of the measures of prevention adopted, it is hoped that the disease has been stayed.

HYSTERIA IN PAVIA.

A KIND of epidemic hysteria seems to have developed itself in Pavia. Some twenty women and girls were found in a small room, lying on straw, and affected from time to time with hysterical convulsions. They first begin to get excited; then turn themselves round, stand up, speak, laugh, and eat; they then are again overcome with distress, turn up the whites of their eyes, gnash their teeth, and become semi-cataleptic. The municipal authorities are endeavouring to trace the origin of this strange epidemic.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Bramann has been recognised as *privat docent* in Surgery.

Giessen.—Dr. K. B. Lehman, Extraordinary Professor in Würzburg, has been offered the Professorship of Hygiene.

Greifswald.—Dr. Friederich Löffler, *privat docent*, and up to the present time Staff Surgeon in charge of the Chemico-Hygienic Department of the Military Hospital in Berlin, has been appointed Professor of Hygiene.

Halle.—Dr. Kretschman has been recognised as *privat docent* in Otology, and Dr. Risel as *privat docent* in Hygiene.

Vienna.—Dr. Mracek has been appointed to the charge of the Department for Syphilis and Skin Diseases. Professor Krafft Ebing of Graz has been nominated as successor to Professor Leidesdorf, who has retired.

Würzburg.—Professor Fritsch of Breslau has declined the invitation to migrate. Professor Kunkel has been appointed Extraordinary Professor of Pharmacology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Ludwig Julius Budge, Professor of Anatomy and Physiology in the University of Greifswald, in his seventy-seventh year. He was formerly professor in Bonn, but has been in Greifswald since 1856. His chief researches have been on the nervous system, one of his most important discoveries being the origin of the sympathetic from the spinal cord itself. For the paper in which he demonstrated this he was awarded the Monthyon prize by the Academy of Sciences in Paris. In Histology he demonstrated the origin of the bile capillaries in the liver. Amongst his works the best known perhaps is his manual of Physiology.—Dr. S. P. Golubtseff, chief medical officer of the Odessa Educational District.

MILAN, through her Communal Council, has been engaged in considering twenty-two several projects for providing her with pure drinking-water. All of these have been rejected, including some which undertook to bring the water from the uncontaminated mountain reservoirs, and, much to the mortification of her soundest sanitarians, she is now favourably entertaining a scheme of deriving her drinking-water from the subsoil of the flat Milanese provinces.

AN International Medical Congress on Tuberculosis commenced its sittings at the Sorbonne on the 25th inst. More than two hundred medical men, from different parts of the world, have, we are informed, promised to read papers.

WE understand that the Royal Commission on Higher Education will sit for a fortnight longer and will then adjourn over the vacation. It is probable that their report will be issued early in October.

AFTER a long absence, small-pox made its appearance last week in Wandsworth. The disease appears to have been contracted during rag-picking, and the attacks were only two in number.

THE Bradshawe Lecture at the Royal College of Physicians will be delivered by Dr. William Carter on Saturday, Aug. 13th, at 4 P.M. Subject: "Uræmia."

THE ANNUAL REPORT OF THE METROPOLITAN BOARD OF WORKS.

SURVEYING as it does the public works of so vast an aggregate as London, the annual report of the Metropolitan Board of Works might reasonably be expected to be a document of special and peculiar interest, but proves upon perusal to be singularly disappointing. It is disappointing for two reasons: first, because the information conveyed is strangely meagre; and, in the second place, because what there is is chiefly a record of failure and shortcoming. The great work of the Board is the management of the sewers, and it is hardly creditable either to the members or their constituents that this work should still be very largely in an experimental stage. Of the methods of disposal adopted we have spoken repeatedly, and to that subject we do not now recur, but whatever difference of opinion may exist as to the proper method of getting rid of the refuse of London, it is surely impossible on any theory whatever to find an excuse for the following:—

"In the years 1885 and 1886 the Board had, with a view to checking the development in the sewers themselves of the injurious compounds which are generally known as sewer gas, introduced during the summer months deodorising materials into the sewers at the intermediate pumping stations at Pimlico, Deptford, Battersea and Vauxhall, and at other places in different parts of London. The cost of thus treating the sewage in the sewers was very large, and the question was raised whether the results were worth the expenditure, and whether equally good results could not be obtained by some less expensive method. Upon this point also Sir Henry Roscoe was consulted, and, under his advice, the Board discontinued putting manganate of soda and sulphuric acid into the sewers, and reverted to a

process which had been tried in the years 1870 and 1871, and had since fallen into disuse, the process being to neutralise the offensive gases as they rose through the ventilating shafts, by an application of sulphurous acid. The Board accordingly, early in July last, gave directions that whenever complaints were received of offensive odours being emitted from any of the ventilating shafts of the sewers under the Board's control, sulphurous acid should be applied. Under these instructions 146 ventilators to the sewers on the north side and 48 to those on the south side of the river Thames were so dealt with at a cost of about £600. So far as can be judged, the result has not been unsatisfactory."

It is, indeed, self-government with a vengeance, if an unfortunate public must lodge a complaint before getting disinfectants applied to a foul sewer! If the disinfecting department has to be kept up to its work in this way, a simpler, because more direct, plan would be for the public to take the work into its own hands and dispense altogether with the costly machinery of a public department. We wonder how many complaints have emanated from poor neighbourhoods. Rich people may sometimes take a pleasure in assuming the quasi-public position of a complainant in these circumstances. But the very poor, who stand in no less need of the functions of the ædiles, have neither time nor address for such enterprises. By what tests the result has been ascertained to be "not unsatisfactory" does not appear. We much suspect that so favourable a judgment is not the award of an unbiased authority, and means only that the long-suffering Londoner has borne without a murmur much unnecessary poisoning with sewer air. It is shocking to find, even in the Metropolitan Board, not only such an extraordinary faculty of neglecting duty, but also such a complete self-satisfaction at the same time.

PLEURO-PNEUMONIA AND TUBERCULOSIS.

THE Departmental Committee which has been investigating the problems connected with these diseases among animals has produced a highly interesting and valuable report. Of the general soundness of the views which they put forward hardly any doubt can be entertained, but still it may be doubted if the most valuable part of the matter which they have produced is not to be found in some of their incidental statements. Thus, for example, the stimulus necessary to stir up the Legislature to the adoption of such measures with reference to tuberculosis as have been proved effectual in connexion with other diseases is precisely such as is afforded by the authentic and authoritative statement that "there is actually a regular trade in stock infected with tuberculosis"; that animals so diseased go by the name of "wasters" and "mincers," and are "frequently slaughtered in the neighbourhood of the larger towns, to which such portions of the meat as are likely to escape the observation of the inspector of nuisances are sent for the purposes of sale among the poorer inhabitants, and especially for the making of sausages." The imperative necessity of suppressing such malpractices by effective regulations is perfectly obvious, for not only do they amount to a cruel fraud upon the unwary purchaser, but they tend directly to the dissemination of the disease which is of all diseases the most destructive in these latitudes of adult human life. We cordially support the recommendation of the Committee, that tuberculosis should be included in the Contagious Diseases (Animals) Acts, so far as may be necessary to provide for the seizure and slaughter, under proper conditions as to compensation of the owners, of all animals found to be so diseased. We are even disposed to think with Mr. Horsley that the act of knowingly breeding from cattle affected with this disease should be made a penal offence, and that failure to notify an outbreak of the disease to the sanitary authority should equally expose the defaulters to punishment.

The branch of the report which deals with pleuro-pneumonia contains a highly interesting discussion of the efficacy of inoculation. The commissioners come to a conclusion unmistakably adverse to the operation, but their opinion is so largely based upon considerations of mere convenience—as, for example, the difficulty of carrying it out on a sufficiently comprehensive scale—that it can hardly be said to advance the scientific discussion. As a measure of practical hygiene, the process of slaughtering animals that have come within the sphere of infection is no doubt entitled to the preference which the committee extend to it. But we are persuaded that it is very good practical common sense to set much store by the investigation of such pathological problems. Thus when the committee say, "We consider that, if it should be deemed necessary or desirable that further experiments should be conducted, they should be commenced on the clear understanding that the investigation is undertaken entirely in the interests of science, and without any reference to the measures proper to be adopted for the extinction of the disease," they seem to us to be taking a false point. The conditions under which alone in ordinary practice inoculation can be performed are such as to preclude the drawing of a conclusive or in any way satisfactory inference. The animals are under observation for so short a time, and their antecedents are so little known, that statistical results are wholly out of the question, and in such a matter an inference not based on reliable statistics is but a poor conclusion. If, then, any satisfactory determination of an eminently practical question is to be reached, it must be by the method of experiments carefully planned and carried out. But why should this be said to be in the interests of science? The interests of the science of medicine, whether preventive or curative, are, as we understand them, the interests of men; or, as in this case, the interests alike of man and beast. The incautious and somewhat foolish figure of speech which represents science as an entity, having interests of her own which she pursues with remorseless disregard of suffering incurred or treasure expended in her service, is responsible for no small proportion of the senseless prejudice which every now and again breaks out in wholesale denunciation of pathologist and pathological investigation. We are satisfied that nothing was further from the commissioners' thoughts than to give any sort of countenance to this foolish misconception. But, nevertheless, we must protest against what seems to us to be their very infelicitous use of language.

THE GLASGOW EXHIBITION.

(From our Special Correspondent.)

Glasgow, June.

UNDOUBTEDLY the Glasgow Exhibition has proved an unexpected and unparalleled success. It is the first exhibition on record that was absolutely complete and ready on the opening day. This contributed to bring about the success which is now the subject of surprise and self-congratulation. We are not, however, prepared to say that this success is altogether an unmixed blessing. It may imply a reproach which doubtless the inhabitants of Glasgow will take to heart. The Exhibition is well worth seeing, but there have been many exhibitions quite as good, and many very much better. If, nevertheless, the number of admittances has exceeded anything before recorded, we take it that this is due to the paucity of diversions from which the inhabitants of Glasgow and its neighbourhood have suffered. Without wholesome physical and mental relaxation, it is not possible to maintain the health of the population; and the means of amusement in such towns as Glasgow are lamentably scarce. Hence the rush to the present Exhibition—a popularity pointing clearly the moral that other though somewhat similar methods of instruction and amusement must be provided. This will be one of the best means of combating the intemperance which is the besetting sin of Glasgow, and which undoubtedly powerfully contributes to bring about the present high death-rate. When people assemble together in a large but enclosed space, such as an exhibition building, when the poor and the rich, the rough and the refined elements of society, intermingle, the manners of each and all are improved. The sobriety and good behaviour of the majority prevent the minority from committing excesses; thus a holiday is enjoyed away from the public-house, and without the degradation that otherwise too often results when no attractive entertainments are within easy reach of the people. Such diversions as the Glasgow Exhibition will, we maintain, help to improve the behaviour, the morals, and the health of the great industrial population that lives on the borders of the Clyde.

With respect to the exhibits themselves, there are a fair quantity that will prove of interest to the medical profession or the sanitary reformer. There is, to begin with, a plentiful supply of ambulances with every necessary appliance provided by the St. Andrews Ambulance Association. This Association has since 1882, when it was first established, imparted instruction to over 18,000 persons. Further, the waggons supplied by the Association have been of service 4160 times for the conveyance of the sick and wounded. Apart from the ambulances proper, Class VII. is devoted to carriages, bicycles, &c. In this there are a good many exhibitors, the majority being from Glasgow, and these latter satisfactorily show that they are able to produce whatever means of conveyance local practitioners may desire. Like the carriages, taking up a large amount of space, there is an important collection of furniture. Comfort and more or less artistic excellence are the principal attributes of these exhibits; but some, however, affect health, and notably school furniture. The School Board desk and seat of the Bennet Furnishing Company are well suited to growing children, and the question of preventing malformation while young persons are studying at school is a subject with wide-reaching consequences. The domestic problem of washing is treated in the same part of the Exhibition, and we particularly noted Frater's washing machine. This is a tank that is placed over a spirit, oil, or gas burner. The clothes are contained in a drum, which is turned in the boiling water by means of a handle. The kitcheners and fireplaces that adjoined this exhibit did not present any new feature so far as public health is concerned, and no prominence is given to the vexed question of smoke abatement. There is, however, a fair display of ventilators. The rivalry of different cones again perplexes the critic. We have, for instance, Walker's patent double exhaust hardware cowl, and Boyle's well-known air extractor. The former firm has a new inlet ventilator, which consists of a great number of oblique and radial perforations in a board, so that the air is thrown upwards and split up into a number of currents, which, intermingling and colliding one with another, prevent draughts. Messrs. Harding and Co., of Leeds, have applied, in a somewhat different manner, the same principle, and with marked success. In Glasgow, the exhibits of Messrs. Boyle and Sons, in so far as they deal with the ventilation of ships, are of special interest, for it is needless to remark that an exhibition held on the banks of the Clyde must of necessity excel in all that relates to shipping. In this respect, however, we think more prominence might have been given to the problems of sanitation at sea. In spite of the pressure brought to bear, ship-builders are still too apt to consider ships as mere means of transport, rather than as dwellings where thousands of persons must live, and should live under healthy conditions. There is still great room for improvement in the ventilation of ships. In respect to mechanical ventilation, Aland's and Blackman's power ventilators are side by side disputing for public favour. Aland's air propeller is now applied at the Sardinia-street Public School, Glasgow, where a two-horse power Otto gas engine is used. This costs 4*s.* 9*d.* a week, and, working a 48-inch propeller, can move 13,000 cubic feet of air per minute. From what we were able to observe, it seems a very powerful ventilator, requiring only slight motive force. The Blackman air propeller is well known, being largely employed for buildings and blast furnaces.

In a section devoted to sanitation we found many excellent and well-known appliances—H. Twyford's sanitary earthenware, for instance. Then, of course, Messrs. Doulton and Co. hold a very prominent position. Not only have they provided the lavatories in use at the Exhibition, but they have a very large stall, where a great variety of closets, drain pipes, &c. may be examined. Doulton's self-adjusting joint for drain pipes is a very useful adaptation of the Stamford joint, which prevents leakage even when the earth sinks and causes the pipe to twist out of line. They have also a good street urinal made with glazed stoneware. This is impregnable, and is therefore well suited for the purpose. We were then shown a closet with a special pipe to separately but simultaneously flush the syphon of the overflow pipe. Further, the valve of the pan opens with its back against the overflow aperture. Thus the soil cannot be thrown or splashed into the syphon of the overflow, an accident which sometimes occurs in closets built in the usual way, and when the valve opens towards the overflow. Messrs. Bourtree-hill and Co. have some intercepting chambers, where the glazed channels are armed with ledges which rise on the opposite side to the inrush of water; thus the water is kept within the channel and does not splash over the borders. This is a decided improvement. The enamel also seemed of very good quality. Among the familiar exhibits of Messrs. Shanks and Co. we found the same principle applied to hand-basins for washing on board ships. A slut or inside ledge is provided, which prevents the water spilling during rough weather. Further, the plug or valve is made of indiarubber, so that when it sways about during a heavy roll at sea it does not break the basin. For closets this firm uses nickle-plated brass down pipes that provide the flush, and these are certainly more ornamental. In their efforts to fit up washing-basins and baths in such a way as to be open underneath so as to be easily cleaned and ventilated, Messrs. Shanks are following a true principle of hygiene.

The silicated carbon filter, Barstow's patent combination filters, Slack and Brownlow's filters, and Doulton's filters were all exhibited, each possessing features that have recommended these indispensable domestic safeguards to a large class of purchasers. There are also several medical waters, notably the waters of the Homburg Baths, one of the rare exhibits coming from the Continent. The English colonies are, however, better represented. There is a large Canadian and Indian section, and we were pleased to meet with the exhibits of the Australian Wine Importers Company and the popular wines of Messrs. P. B. Burgoyne and Co.

The food section is a large one, and notably that dealing with oatmeal. The Red Star oat flour of Messrs. White and Co., the preparations for invalids' and children's food of Messrs. James Marshall, the corn flours of Brown and Polson, the Scotch biscuits, specialities, &c., of Messrs. Macfarlane and Co., and Scott's Midlothian oat cakes, together with other similar wholesome, nutritive, and simple but excellent articles, hold a prominent position in the Exhibition, and are extensively patronised. Then we have Spratt's cod-liver oil, and Fry's chocolate bonbons, the Swiss milk, and Nestlé's milk food. Feltoe and Sons, Evans, Sons, and Co., and L. Rose and Co. all provide lime-juice, which is at once wholesome, refreshing, and useful.

The chemical section is poor and somewhat mixed, for here we find Colman's mustard and Price's patent candles, both excellent exhibits. The pharmaceutical and general chemicals of Messrs. May and Baker, and the perfumery of the Glasgow Apothecaries' Company were interesting. Finally, as a reminder of the inconveniences of the Scotch climate, we came across a large assortment of waterproof coats. Most notable among these were the exhibits of Messrs. Charles Macintosh and Co., of the North British Rubber Company and the Indiarubber and Telegraph Works.

The gardens of the Exhibition are pleasant, and there are some interesting things to see. But the Bishop's Palace, always overcrowded, is sadly in want of ventilation. Here is a good opportunity lost of testing the practical virtues of the ventilators exhibited in the main building. More pleasant is Van Houten's artistic Dutch house, where his cocoa is served in elegant cups and in comfortable rooms. It will be seen, therefore, that the Glasgow Exhibition contains much to instruct and to amuse. But if, nevertheless, the visitor is not yet satisfied, then the illustrated and comic pamphlet written by one of the wittiest journalists of Scotland, and entitled "The Groveries," will supply so amusing a skit of the entire show that all sense of disappointment will disappear drowned in a flood of merriment.

OPEN SPACES.—The Marquis of Tavistock formally opened at Bedford, on the 11th inst., a people's park, comprising sixty acres.—The Islington Vestry, after considerable discussion, has decided to contribute £2500 towards the purchase of Clissold Park for the use of the public.—Prince Albert Victor, on Saturday last, opened the new Jubilee Recreation Grounds at Bury, which have been presented to the town.—The Metropolitan Board of Works has decided to carry out the Hampstead-heath Enlargement Act, relying on the contribution of £50,000 from the Charity Commissioners, the Board having to provide £149,500.—A public park at Longton, North Staffordshire, was opened on Wednesday by the Duke of Sutherland, for which his Grace had given forty acres of land, and which has since been laid out, at a cost of £5000, by public subscriptions. The park, in commemoration of the Queen's Jubilee, is named the Queen's Park.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wandsworth District.—The six medical officers of health of this metropolitan district give the general death-rate for the whole area during 1887 as 15·7 per 1000, the zymotic rate being 2·72; and they express their satisfaction that, together with an increasing density of population, there has, on the whole, been a steady diminution in mortality—a result which they, in the main, ascribe to the complete system of drainage in operation, the purer drinking water which is supplied, and the generally improved conditions under which the people are living. The separate summaries which follow are largely statistical, but some general points of interest are also adverted to. Dr. Kempster reports that in East Battersea the method of ventilating sewers by upcast shafts reaching above the highest points of houses has been considerably extended, and he would like to see even a wider application of it; he also states that under the system of sulphur fumigation as adopted by him for rooms after the occurrence of infection he has never known a recurrence of disease. In the West Battersea district complaints of offensive water were received, the condition being brought about by dead-ends in the pipes. All the bakehouses, cow-houses, and slaughterhouses are, according to Mr. Oakman, in a satisfactory condition, and the district has been much improved by such measures as draining and paving. In Clapham some fatal diphtheria occurred, but whilst certain local defects were discovered, the disease could not be set down to them by Dr. Newsholme with any certainty. According to Dr. Orr, the Putney and Roehampton district was remarkably exempt from infectious diseases, the so-called zymotic rate being only 0·44 per 1000 living. In Streatham no special prevalence of such disease occurred, but the difficulty in securing proper isolation on the occurrence of some diphtheria cases leads Dr. Sutton to call attention to the exclusion of that disease from the Asylums Board hospitals. If that board is to become the isolation authority for the metropolis time will doubtless bring about a change in this respect. Wandsworth exhibits a decided diminution in the amount of infant mortality—a result which Dr. Nicholas ascribes, in the main, to the lessening fatality of infectious diseases. Owners and occupiers of houses are also found to be much more willing than formerly to comply with the sanitary instructions issued to them.

Towyn Urban District.—The general death-rate, which has been much the same for some few years past, stood at 17·3 per 1000 last year, and the percentage of deaths under one year to births was 14. This, Dr. Grosholz very properly regards as needlessly high, and, whilst he cannot set it down to any want of care in bringing up infants, he does consider that it may very likely be in part due to the great number of intermarriages which have been going on for some generations past in the district. The needs of Towyn as regards water supply and drainage remain much what they were, and public opinion is stated to be ripe for some progress in these matters.

Romford Rural District.—Dr. Alfred Wright follows his usual practice of setting out in a useful tabular form the various occurrences of infectious disease, together with a statement of the action taken. As regards scarlet fever and diphtheria, the opinion is expressed that there is a special connexion between them, and Dr. Wright states that several cases of diphtheria have been noticed by him which appeared to have their origin in cases of scarlet fever, and *vice versâ*. A detailed account is given of the sanitary circumstances of the different parts of the district and of their varying wants, and it is evident that there is still much room for improvement in such matters as water supply, drainage, and the disposal of excrement and refuse. At Ilford and Chadwell a new system of sewerage has been provided, and in a number of instances house-owners have been required to do away with their cesspools and connect with the public sewers. The general death-rate for the year was 16·5 per 1000.

Stratford-on-Avon Combined Districts.—Taking these two urban and four rural districts as a whole, their death-rate during 1887 was 17·7 per 1000 living, the rates varying from 12·7 in the Stratford rural to 17·9 in the Evesham urban district. There are now three isolation hospitals in this combined area. Alcester and Evesham have provided excellent buildings, and one of these did good service in preventing extension of disease last year; Stratford, too, provided a temporary one, but it came too late to properly check the scarlatina which especially called for it. At Alcester no less than 764 patients have been isolated since 1875, 694 being scarlatina cases. At Evesham, where such work is comparatively new, 22 patients were received last year. Considerable care is evidently devoted to the proper control of dairies and milk-shops, and the results obtained from inspections made in each district are carefully set out. Attention is, in the main, devoted to secure the storage of milk in places to which foul air has no access, to guard against possible pollution of water supplies, and to prevent persons capable of transmitting infection from having access to either milk or cows. Mr. Fosbroke's report is, like those formerly issued by him, an excellent type of the sort of record that is needed from a medical officer of health who seeks to indicate to his sanitary authorities the value of the work they have already done and the lines on which future sanitary progress is needed.

Berkshire Combined Districts.—No general report on the sanitary circumstances or progress of these districts is included in the pamphlet embodying the separate account of each of its component parts, except in so far as statistics are concerned. The general mortality of the twelve districts was 15·8 per 1000 in 1887, the lowest rate being 12·1 for East Hampstead rural, and the highest 25·3 in the Wallingford urban district; the high rate in the latter district not being due to any special prevalence of preventable disease. Very generally the account given of sanitary work consists of a statement of routine measures taken upon the occurrence of disease or of some complaint, proceedings before the magistrates being at times requisite in order to ensure compliance with the instructions issued, as in such matters as water supply. But there is little or nothing as to the needs of the district in the future, nor does the report contain advice to the various sanitary authorities as to such matters as still call for remedy with a view to the prevention either of nuisance or disease, the record being almost strictly one dealing with occurrences during the year that is past.

Isle of Wight Rural District.—It is difficult in such a district to make a correct estimate of population with a view to a comparison for the purposes of death-rate; but assuming the estimate for 1887 to be a correct one, the death-rate was 15·9 per 1000. This is slightly in excess of the mean for the past five years, and whether compared with the corresponding rate for the whole of England and Wales, or with that for rural districts generally, the Isle of Wight rural district is somewhat losing ground. The gradually increasing death-rate is very properly regarded by Dr. Groves as admonitory, and it may be viewed as mainly due to diphtheria, which, in its passage across the island, has settled down in a number of localities, where it has found conditions favourable to its development and maintained vitality. The prevalence of phthisis in this district admits of more than one explanation, especially in view of the number of sick visitors who frequent the island; but one of its main causes prevails in the defective character of the houses, both old and new, which are ill ventilated and damp, and are built upon sites but little adapted to their purpose. Phthisical patients should have their attention drawn to these obvious drawbacks which attach to the rural areas of the Isle of Wight. The district is still without an isolation hospital, some of its populous places are without proper bye-laws, and, although certain works of improvement have been effected, we cannot but regret to read of insanitary conditions which have for a great number of years been brought under notice, and this without a remedy being applied. Individual nuisances are often dealt with, but a sanitary authority has duties beyond this. The future health of the district can only be properly maintained by the adoption of comprehensive measures in advance, and the sanitary authority seem lacking in individuals who are determined to make progress, and hence the island abounds in badly built houses, in cesspits soaking no one knows whither, and in wells liable to pollution. Dr. Groves is evidently discouraged with this state of things, but he has the credit of setting forth the needs of the district &c., and of telling its past sanitary history, in a way that leaves nothing to be desired.

Harwich Urban District.—In Harwich the death-rate for 1887 was 14·4 per 1000—a rate that has been fairly steady for some years; and there has been no special prevalence of infectious disease, apart from an epidemic of whooping-cough. A new water supply was acquired last year, overcrowding has been diminished, but the district stands in need of a modern code of bye-laws. The ventilation of the sewers is also referred to by Dr. Hardwicke as both imperfect and insufficient.

Teignmouth Urban District.—Deducting deaths in visitors, the annual rate for 1887 is given as 16·64 per 1000; Dr. Piggott adding that an excess in the deaths from infectious diseases was due to an increase in whooping-cough and enteric fever. Of the latter disease, 33 cases came under notice, in addition to 15 from so-called "other or doubtful" fever; and the sanitary conditions with which they were associated are referred to in the report. Insufficient flushing of closets followed on an insufficient water supply; a number of houses remain unconnected with the new sewers; and other conditions as regards sewerage need attention. Bye-laws as to the control of dairies and milk-shops are being prepared.

Gloucestershire Combined Districts.—In this important combination, which includes eight rural and five urban sanitary districts, covering in all some 620 square miles, the death-rate during 1887 was 15·6 per 1000, varying from 12·1 in the Chepstow rural to 19·5 in the Awre urban district. Dr. Bond, in dealing with the infectious diseases, has for some time past grouped under the heading "Scarlatinoid" scarlet fever, diphtheria, and croup. Scarlatina, he finds, has since 1887, when it reached its zero point, exhibited a tendency to increase, whilst diphtheria, "its cousin-german," has continued to fall, thus following the lead of the former affection, though not at an absolutely corresponding rate. The continued fevers have fortunately diminished, and this improvement cannot be separated from the corresponding change for the better that has been steadily in progress as to the local sanitary circumstances. No change has taken place as to hospital provision, Cirencester still standing alone in having provided such accommodation; and no works of sewerage or drainage of any importance have been undertaken during the past year. At the time when Dr. Bond's report was written, much more than can now be looked for in the immediate future was expected from the Local Government Bill; but the circumstance that nearly all the important sanitary provisions affecting County Councils have been expunged, temporarily at least, from the Bill, materially defers the hope, in which many joined with Dr. Bond, that it would form a basis for a reconstruction of the administrative machinery in matters of public health.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5459 births and 2884 deaths were registered during the week ending July 21st. The annual rate of mortality in these towns, which had been 15·9, 15·0, and 15·7 per 1000 in the preceding three weeks, further rose last week to 16·0. During the first three weeks of the current quarter the death-rate in these towns averaged but 15·3 per 1000, and was 4·9 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12·2 in Brighton, 12·7 in Nottingham, 12·9 in Hull, and 13·0 in Derby. The rates in the other towns ranged upwards to 19·4 in Salford, 19·8 in Wolverhampton, 20·2 in Preston, and 21·1 in Manchester. The deaths referred to the principal zymotic diseases, which had been 276 and 354 in the preceding two weeks, declined again last week to 311; they included 106 from diarrhœa, 68 from whooping-cough, 50 from measles, 31 from scarlet fever, 27 from "fever" (principally enteric), 23 from diphtheria, and only 6 from small-pox. No death from any of these zymotic diseases was registered during the week in Plymouth, whereas they caused the highest death-rates in Wolverhampton, Cardiff, and Halifax. The greatest mortality from diarrhœa occurred in Newcastle-upon-Tyne and Portsmouth; from whooping-cough in Derby, Wolverhampton, and Halifax; from measles in Bradford; from scarlet fever in Blackburn; and from "fever" in Cardiff. The 23 deaths from diphtheria included 15 in London and 3 in Manchester. Small-pox caused 2 deaths in Sheffield, 1 in London, 1 in Bristol, 1 in Preston, and 1 in Hull, but not one in any of the twenty-three other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 2 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 889 at the end of the week, against 924, 897, and 890 on the preceding three Saturdays; 105 cases were admitted during the week, against 81 and 103 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 176 and 164 in the preceding two weeks, were last week 166, and were 25 below the corrected average. The causes of 50, or 1·7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Sunderland, Newcastle-upon-Tyne, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Brighton, and Manchester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding five weeks from 20·0 to 16·1 per 1000, rose again to 18·4 in the week ending July 21st; this rate exceeded by 2·4 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 11·3 and 12·8 in Dundee and Perth to 18·5 in Paisley and 23·0 in Glasgow. The 466 deaths in the eight towns showed an increase of 60 upon the number in the previous week, and included 12 which were referred to diarrhœa, 9 to measles, 5 to whooping-cough, 4 to diphtheria, 3 to "fever" (typhus, enteric, or simple), 2 to scarlet fever, and not one to small-pox; in all, 35 deaths resulted from these principal zymotic diseases, against 49, 37, and 28 in the preceding three weeks. These 35 deaths were equal to an annual rate of 1·4 per 1000, which was 0·3 below the mean rate from the same diseases in the twenty-eight English towns. The 12 deaths attributed to diarrhœa showed an increase of 4 upon the number in the previous week, and included 6 in Glasgow; they were, however, 27 below the number returned in the corresponding week of last year. The fatal cases of measles, which had been 13, 7, and 3 in the preceding three weeks, rose again last week to 9, of which 7 occurred in Glasgow. The 5 deaths from whooping-cough (including 4 in Glasgow) and the 4 from diphtheria showed a decline from those returned in the previous week. Two of the three deaths referred to "fever" occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 86, 77, and 68 in the preceding three weeks, rose again last week to 84, and exceeded the number returned in the corresponding week of last year by 7. The causes of 73, or nearly 16 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24·8, 20·2, and 22·6 per 1000 in the preceding three weeks, further declined to 19·4 in the week ending July 21st. During the first three weeks of the current quarter the death-rate in the city averaged 20·7 per 1000, the mean rate during the same period being 15·4 in London and 16·5 in Edinburgh. The 131 deaths in Dublin showed a decline of 22 from the number in the previous week; they included 5 which were referred to "fever" (typhus, enteric, or ill-defined), 5 to whooping-cough, 3 to scarlet fever, 2 to diarrhœa, 1 to measles, and not one either to small-pox or diphtheria. Thus 16 deaths resulted from these principal zymotic diseases, against 17 and 21 in the preceding two weeks; these were equal to an annual rate of 2·4 per 1000, the rate from the same diseases being 1·9 in London and 0·8 in Edinburgh. The deaths from "fever" showed an increase of 2, while those from whooping-cough, diarrhœa, and scarlet fever were fewer than those returned in the previous week. The deaths of infants showed a further decline from recent weekly numbers, and those of elderly persons were fewer than in the previous week. Five inquest cases and 3 deaths from violence were registered; and 37, or more than a quarter, of the deaths occurred in public institutions. The causes of 17, or 13 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

"THE INFLUENCE OF SCARLATINA HOSPITALS."

To the Editors of THE LANCET.

SIRS,—With reference to the influence of scarlatina hospitals, which is dealt with in your leaderette of July 14th, may I be allowed to refer to the evidence given before the Royal Commission on Infectious Hospitals? I examined nearly all the witnesses capable of giving evidence on this point, and no case was forthcoming in which there was the faintest charge proved that scarlatina was disseminated in the open air, or was in any way propagated by aerial diffusion beyond a few feet, and that usually in a confined and impure atmosphere. Dr. Tripe's conclusions seem to bear out that evidence, and, although not advocating rashness on the part of sanitarians, I think it is important to get rid of that morbid dread of scarlatina which is engendered by many at the present day, and which leads to much unnecessary expense and tends to cause senseless panic when a case of scarlatina does find admission into an otherwise healthy place. If those in charge of the case will prevent the carriage of foci of disease in articles of clothing or otherwise, and isolate the case, so that the feverish breath of the patient is not immediately inhaled by those susceptible, there need be no extension of the disease; and if the patient be properly disinfected, there need be no long-continued isolation after the fever has departed, unless there are sequelæ.—I am, Sirs, your obedient servant,

Croydon, July 23rd, 1888. ALFRED CARPENTER.

A MODIFICATION IN THE TREATMENT OF BOW-LEGS.

To the Editors of THE LANCET.

SIRS,—Allow me briefly to advocate through your columns a mode of applying plaster-of-Paris for the cure of bow-legs in children, and to point out some of the advantages that may be obtained from its use.

The method is as follows. First, an examination is made of the deformed limb, to gain an accurate knowledge of the exact directions of the abnormal curves. Then a preparatory manipulation to estimate the facility with which the bones will bend. This they will do easily if, as is generally the case, the child be rickety, since they are deficient in earthy salts; moreover, they will not, for the same reason, easily break. Cut out the splints and apply them as if for simple fractures; and, whilst the plaster is still soft, endeavour to remove the deformities by a gradually increasing pressure, taking care that this is not intermittent, and that the shaft of the bone and not the epiphyses is grasped. The gain from the first application is often considerable. In about a week, the time depending much on how the application is borne and how the splint wears, it is removed. A little friction is then applied to the muscles, and another application made. When the bow-legs are cured, the splint is worn until all fear of re-deformity is at an end.

Plaster-of-Paris is of universal application, and can be modified to suit cases of the most varied kind. The length, shape, and weight of the splints rest with the surgeon. Locomotion can be accurately regulated. In the worst cases of rickets, when the disease is in an acute stage, no extensive manipulation can be made (*ça va sans dire*), but the deformity can be arrested. In cases less severe, but where it is necessary to take in the knee, the parents can be assured that this will only be for a short time, for it is soon possible to cut down the splint and use an elastic knee cap, thus allowing movement. The plaster can then be rounded over the sole of the foot and made of such a shape as to render standing impossible. Finally, as the child gets better, the plaster can be pressed into the arch of the foot. The child can then walk a little, without a recurrence of the deformity.

Rickets is acknowledged to depend largely on bad hygienic conditions, and therefore is frequently found among the poor. In manufacturing towns the houses are often converted into workshops; obviously, then, a light, non-cumbrous apparatus that easily allows the patient to obtain fresh air is of enormous constitutional advantage. The application can be quickly made, often without making the patient cry; it is a perfect mould of the limb, and therefore does not produce sores. The splints and irons in common use appear to act as an ogre—at all events to the uneducated mind; and but few prejudices exist of widespread acceptation that are altogether without some reason. I have used this method with various modifications from time to time for between two and three years, and have here endeavoured to point out the more prominent advantages. To the practitioner conversant with the peculiarities of the poor many more will, I think, occur.

I am, Sirs, faithfully yours,

Luton, July, 1888. W. BOLTON TOMSON, M.D.

JUDICIAL EXECUTIONS BY HANGING.

To the Editors of THE LANCET.

SIRS,—A considerable amount of public attention has been attracted to the above subject by the recent revolting mishap which occurred at Oxford on the 17th inst., when a man named Upton was executed, and his head almost torn from his body in the process.

This and several similar accidents which have taken place previously at executions, under what is known as the "long-drop method," indicate, I think, that some improvement is needed in the mode of carrying out capital punishment. Without going into the question of what is the best means of inflicting the death penalty, I would suggest that, so long as hanging is the legal method, it should be carried out with more scientific care and judgment. Under the existing system the hangman appears to be the sole authority for deciding upon the length of drop required for causing death with despatch and decency, and he in this case formed his opinion in a most hurried and inaccurate manner, not discovering until the culprit was upon the scaffold that the drop was too long, and that the neck was not sufficiently muscular to bear the strain it was about to be subjected to without severe laceration and bloodshed. I have had some experience of judicial executions by hanging both in this country and abroad, and believe that timely attention to a few material points would obviate such an indecent spectacle as the head of a criminal being nearly torn off his body as in this instance. The hangman's explanation, that "the injury was owing to the thinness and shrivelled character of the neck," was probably correct; but surely this condition should have been noticed and taken into consideration by some competent authority before the wretched man arrived upon the scaffold, and the length of drop regulated accordingly. The prison surgeon is doubtless the most competent authority to determine what length of drop is necessary to cause speedy death by hanging after a due examination of the criminal, and taking into consideration the weight, height, and age, together with the muscular development and character of the skin, especially of the neck. The quality and thickness of the rope used ought also to be authoritatively determined. The surgeon's report upon the criminal's physique &c. would be a valuable aid and guide to the executioner (whose personal opportunity of forming an opinion is very limited, only two minutes elapsing, according to the account in *The Times* of the Oxford case, from the time the executioner entered the cell to the falling of the drop), and would, I think, come properly within the range of the former's duties in the cause of humanity, and greatly tend to lessen the chances of a repetition of these mishaps.

I am, Sirs, your obedient servant,

J. HIGHAM HILL, M.D., F.R.C.S.E.

Bedford-square, W.C., July 24th, 1888.

To the Editors of THE LANCET.

SIRS,—The Home Secretary seems, by his reply in the House last night to Mr. Brookfield, to be very imperfectly informed of the results from "time to time" of the present haphazard system of executing criminals. So late as April and August of last year the murderers Currell and Lipski (whose executions I attended) had quite narrow escapes from decapitation, the former getting a drop of *seven* and the latter *eight* feet, though Berry informed the Governor of Newgate that the drops had been arranged at five feet six inches and six feet respectively. In Currell's

case all the veins leading from the brain, together with the œsophagus and many muscles, were ruptured, large quantities of venous blood escaping through the mouth into the white cap, the lower border of which being included in the constricting noose, pent up the fluid, so that it only filtered through in a small stream to the bottom of the pit, where the prison surgeons and myself were taking the pulse. In Lipski's case the damage done to the integuments, muscles, and spine was extensive, but there was only superficial bleeding to a small extent. I may add that Lipski's pulse beat for thirteen minutes (stopping once after five minutes) at the rate of 160, which rate would prove (according to Professor Haughton) complete insensibility. All others whose executions I have witnessed had good normal pulses (80) for about ten minutes, strangulation being the cause of death.

I am, Sirs, yours truly,

J. J. DE ZOUCHE MARSHALL, L.R.C.S.I., &c.

Hastings, July 24th, 1888.

CHIAN TURPENTINE IN THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—On Nov. 19th, 1887, the case of Mrs. B—— was reported in THE LANCET, by Dr. John Clay of Birmingham. By referring to that it will be seen that Dr. Clay speaks of it as a case of "Epithelioma of the Uterus and Vagina," in which the disease had "disappeared under the use of Chian turpentine." Mrs. B—— died on March 18th, 1888, of epithelial cancer of the uterus, with secondary deposits in the glands of the neck and abdominal glands.

I am, Sirs, yours truly,

Newton Abbot, July 18th, 1888. W. G. SCOTT, M.B.

LIVERPOOL.

(From our own Correspondent.)

PARAFFIN LAMP FATALITIES.

IN previous letters allusion has been made to the dangers of paraffin lamps. The city coroner held two inquests on the 24th inst., which showed the fatal results of these dangers to three persons. One of these cases was that of a woman with a baby in her arms; she was carrying a lamp, which fell from her hands, was smashed, and set her clothes alight. When the neighbours, hearing the screams of the woman, burst into the house, they found that the paraffin had done its work too well, and both mother and child died from the injuries. The other victim was a woman aged seventy, who, to use her husband's words, was "covered with burning oil from the shoulders downwards." He tried to smother the fire with her clothes, but unsuccessfully.

DRUNKEN MEN IN RAILWAY CARRIAGES.

The recent occurrence in a railway carriage, in a train coming from London to Liverpool, again brings to the front a very serious danger in connexion with railway travelling. The trains from this city to London and *vice versâ* perform the journey in four hours and a half, in some instances even in less time. This means very rapid speed and very few stoppages. No reliance can be placed upon the cord of communication, nor can it always be reached. Hence passengers may be for about two hours at the mercy of a drunken maniac. There could be nothing unreasonable in a bye-law forbidding persons in a state of intoxication from travelling on any railway.

ANOTHER DEATH FROM HYDROPHOBIA.

The city coroner held an inquest to-day on the body of a girl aged seven, who died on Monday. Dr. Jarvis, one of the resident surgeons of the North Dispensary, said that the cause of death was hydrophobia. It appeared that a few weeks ago the child was bitten in the neck by a large brown dog. The same dog bit a boy, who is now apparently well. The dog was destroyed.

Liverpool, July 25th.

LAMBETH POLYTECHNIC INSTITUTION.—On the 25th inst. the Princess Louise, accompanied by the Marquis of Lorne, inaugurated the above institution, the origin of whfch is due, we believe, to the Rev. Freeman Wills, of Shoreditch.

BIRMINGHAM.

(From our own Correspondent.)

THE JAFFRAY SUBURBAN HOSPITAL.

ON Tuesday, the 24th inst., an additional wing to this valuable institution was opened by his Grace the Duke of Norfolk in the presence of a company of distinguished visitors. The founder, Mr. Jaffray, in an appropriate speech, gave details of the progress made in the original designs for which the hospital was established, and said that these purposes had been amply fulfilled. Already the endowment had reached £36,000, and the annual subscriptions £800 a year—a matter for much congratulation to himself and those friends who had so admirably aided him in the organisation of this undertaking.

THE INGLEBY LECTURES.

These annual lectures, two in number, were given this year by Mr. W. Thomas, one of the surgeons to the Children's Hospital, and dealt with the treatment of some of the surgical diseases of children. Carefully prepared and full of practical interest, they were duly appreciated by an audience which, though it cannot be said to have been numerous, was fully sensible of the merits of the work placed before them, which they recognised by the warm tribute of thanks accorded to the lecturer at the close.

THE MUSICAL FESTIVAL.

This triennial source of income to the General Hospital gives promise of not being behind its predecessors in the spirit in which the arrangements are being carried out for this occasion. A new oratorio, "Judith," by Dr. Parry, will form one of the principal features of the festival. Sir Arthur Sullivan's "Golden Legend," with Herr Richter as conductor, and a number of other well-known compositions, have been distributed over the four days the festival will occupy. Arrangements are in forward progress for providing for the variety of details which help to ensure success, and it is confidently expected that a brilliant and numerous gathering will respond to the efforts made for their approbation.

AN ILLICIT STILL.

The Inland Revenue authorities have recently found in this town an illicit still for distilling whisky, of unusual proportions, capable of producing 200 gallons per week. In a damp and humid cellar the detectives patiently waited for four nights in the hope of taking red-handed the owners or workers in this nefarious transaction, but, failing to pounce upon them in this manner, had to fall back upon the landlord of the premises, who protested his innocence of the undertaking. With facilities of such magnitude it might be inferred that whisky would be cheaply made and distributed; the transaction, however, may prove to have been an expensive one in the long run, and the risk of seeking to evade the law to have been dearly purchased.

Birmingham, July 25th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE SCARLET FEVER EPIDEMIC IN JESMOND, NEWCASTLE.

I HAVE reasons for saying that the present epidemic of scarlet fever in the Jesmond district of Newcastle is now fast subsiding; altogether there has been close on 200 cases. Although the Jesmond district is considered the best residential part of the city as regards the streets and houses, its sanitary condition is not above suspicion. It is for the most part the flattest district in the city, and built on a deep clay soil. There have been many complaints in our daily papers as to the drains and the ventilation of the main sewers, but it is to be hoped that these defects may be speedily remedied, and that this beautiful district may be restored to its former place in the estimation of the citizens. Our active medical officer, Mr. H. E. Armstrong, has taken every pains to trace out the origin of this epidemic, and he believes very strongly that it is to be found in the contamination of the milk supply with scarlet fever infection from the family of one of the milkmen, who do not, however, reside near the cows. But it must be admitted that his chain of evidence is weak at this point; even his own committee do not altogether agree with him, for there is no

medical evidence of any kind to show that the family in question have suffered of late from the disease. Many here want more light than we have in the excellent and painstaking report of Mr. H. E. Armstrong before his conclusions carry conviction to the mind. It is fortunate, however, that, whatever may have been the source of the disease, in one respect—namely, that of mildness—it resembles a notable outbreak we had at the Newcastle workhouse a few months ago, where 200 cases occurred, with only two or three deaths.

SOUTH SHIELDS.

On Friday last, a gathering of past and present pupils connected with the local branch of the St. John Ambulance Association took place in the Town Hall, South Shields, for the purpose of presenting to Dr. Legat, their instructor in first aid to the injured, a magnificent silver epergne. Dr. Legat's ability and services as a teacher in ambulance work were referred to in the highest terms.

SCARBOROUGH.

Dr. Middleton, the hero of the Cordova tragedy, in which he was compelled to take the life of a Spanish gipsy to save his own, the gipsy having made a desperate attack upon him in the tower of Cordova Cathedral, has returned home to Scarborough.

COTTAGE HOSPITAL FOR THE BORDERS.

The Earl of Home last week laid the foundation stone of this edifice on rising ground a little way out of Coldstream, known as the Hill House, on the Hirsel estate. The site is the gift of the Earl of Home, who, together with the Countess, has taken an active part in promoting the scheme, in aid of which a bazaar realising over £700 was held last autumn. Subscriptions to the amount of £600 were also raised, and promises of annual subscriptions have been made. The hospital is used for patients from both sides of the border.

GATESHEAD CHILDREN'S HOSPITAL.

At a meeting of the Committee of the Gateshead Children's Hospital, held in the Town Hall on Friday last, the Town Clerk, in the absence of the Mayor, presiding, it was resolved to invite the Princess Louise, on her visit to present prizes at the Girl's High School, Gateshead, to also open the hospital. It was announced that Sir George Elliott, Bart., had intimated his intention of subscribing 100 guineas to the building fund.

STANHOPE.

Dr. Wm. Robinson of Stanhope has written a sensible letter, pointing out the great need of additional convalescent homes on the north-western coast, such as Silloth or Grange. The north-eastern coast, he considers, is unsuitable in winter for most pulmonary cases, while even in summer it is only safe for a short and uncertain time. The great need of such homes is for the members of friendly societies, and he points out that this class has the power by combination of erecting homes for themselves, and so do away with the "letter" system, and also relieve the convalescent homes from their pressure.

Newcastle-on-Tyne, July 25th.

EDINBURGH.

(From our own Correspondent.)

THE UNIVERSITY BUILDINGS.

THE fine buildings of the University Medical School are about to receive the finishing touches which will give them completeness for academic and administrative purposes and fulfil all the details of the original design. For this purpose a row of old houses contiguous to the University has been recently demolished to make way for the lofty tower and the large ceremonial hall that will complete the group of buildings on the east side. It is probable that the next twelve months will witness the completion of the plans, as the funds for the purpose have been for some time in hand, and now that the old houses that blocked the site have vanished, the work of construction will commence and proceed with no further delay. The old University has likewise recently seen the completion of its original design, now some eighty years old, by the erection of a handsome and lofty dome, that towers high above the quadrangle and adds much to the dignity of the edifice and to the adornment of the city. On the summit of the dome is to stand a colossal figure of "Youth," bearing forward the torch of knowledge. This statue, cast in bronze, is now standing complete in the studio of Mr. Hutchison, R.S.A. His conception is a very fine one, and the work has been carried out with admirable accuracy in the modelling and with the greatest delicacy of finish. The figure, in which anatomical truth has been strictly adhered to, conveys a vivid impression of the buoyancy and indomitable energy of youth, whose rugged vehemence is tempered by the classic grace and dignity of the pose. During next week the figure will occupy a temporary position in the quadrangle, and will well deserve the attention of those *alumni* who may be in Edinburgh at the graduation ceremonial, after which it will be raised to its permanent lofty station on the dome. In addition to these undertakings, it is satisfactory to note that the Students' Union is now in an advanced state of construction, the building itself being complete and some of the internal arrangements already in progress.

THE PATHOLOGICAL CLUB.

One of the most useful and flourishing of the medical institutions in Edinburgh is the Pathological Club. As a medical association it is somewhat unique in its constitution, in having a strictly limited membership of thirty. Last week it inaugurated the third year of its existence by a dinner, at which Dr. Batty Tuke, the founder of the club, was entertained by the members. The proceedings were characterised by the enthusiasm which has accompanied all its previous meetings, and which, along with the untrammelled *camaraderie* of its constitution, has done so much to make its labours alike thorough and agreeable.

THE UNIVERSITY COURT.

At the last meeting of the Court an important enactment in regard to graduation in medicine received the final assent of the official governing body. It is now permitted "that students who profess themselves ready to submit to an examination in the first division of these subjects may be admitted to examination therein at the first period of examination after they have completed their attendance on the necessary classes." The clause proceeds to state the conditions on which this shall be allowed—viz., that not less than two of the three subjects in question (Botany, Zoology, and Chemistry, including Practical Chemistry) be taken at one time, any selection of two that may suit the student being permitted. This is a great boon to junior medical students, whether they enter the University in a winter or a summer session, for at the end of their first session those capable of doing so are permitted to pass in the subjects just studied, instead of being obliged to prepare the whole work afresh for an examination at a distance of several months from the time when the preparatory courses of lectures were attended by them. The courses of Mr. W. Ivison Macadam in Chemistry, and of Mr. J. A. Thomson in Natural History, were formally recognised by the Court as qualifying courses for the University medical curriculum.

Edinburgh, July 24th.

DUBLIN.

(From our own Correspondent.)

THE MEATH HOSPITAL, DUBLIN.

LAST week the Medical Board of Governors elected Sir William Stokes, M.D., ex-President and Professor of Surgery, Royal College of Surgeons in Ireland, to the vacant surgeoncy of the hospital, occasioned by the resignation of Mr. Wharton. Several weeks since I mentioned Sir William Stokes as Mr. Wharton's probable successor, and his old colleagues at the Meath may be congratulated on the accession to their staff of one of the leading surgeons of this city. Although there were three other candidates, Sir William Stokes' election was a foregone conclusion.

DEATH OF MR. RIDLEY, OF TULLAMORE.

Mr. Ridley, surgeon to Tullamore Gaol, committed suicide last week at the Royal Hotel, Fermoy, by cutting his throat with a razor. He committed the fatal act, it is believed, while standing before the looking-glass, and afterwards lay down on the bed, where he bled to death. The deceased, who was greatly respected, was about forty years of age, and leaves a wife and three children to lament his untimely death. It is stated that since the imprisonment

of Mr. Mandeville Mr. Ridley had been in a state of mental depression, and there can be little doubt that he committed the fatal deed while temporarily insane.

MEDICAL SCHOOLS AMALGAMATION SCHEME.

The meetings of the committee appointed by the Council and delegates from the three schools are still being held, and a considerable amount of progress has been made in the proposed scheme. A good deal, however, yet remains to be accomplished, and finally, if adopted by the Council, it must receive the approval of the Fellows at a meeting specially convened for that purpose.

PHARMACY ACT PROSECUTION.

At Ballybay Petty Sessions recently the Pharmaceutical Society of Ireland summoned two druggists in Ballybay for compounding prescriptions in contravention of Section 30 of the Pharmacy Act. The schedule of duly qualified pharmaceutical chemists in Ireland having been produced, the Court held that it was necessary to prove the signature of the registrar to the certificate attached to the schedule, as also of the president or two members of the Council, and adjourned the case for a fortnight for the necessary evidence.

HEALTH OF DUBLIN DURING JUNE.

As compared with the previous month, there were fewer admissions of scarlatina cases, but it is to be regretted that two cases of small-pox occurred. Every effort, however, is being made to prevent this disease from obtaining a footing in the city.

ILL-TREATING A LUNATIC.

At a recent meeting of the governors of the Cork District Lunatic Asylum an attendant named Ruby was called before the Board, and gave evidence to the effect that another attendant named Aitkens had ill-treated one of the patients by striking him with a stick in a severe manner. After a due inquiry had been held, Aitkens was punished by being confined to the house for one month and fined £1. Had not his previous character been good, he would have been prosecuted for the assault.

DEATH OF A CENTENARIAN.

An inmate of Oldcastle Workhouse died in the hospital last week at the advanced age of 112 years. For the past year he had been confined to his bed, and the case is an interesting one, as corroborative testimony can be given that the age stated is accurate.

Dublin, July 24th.

BELFAST.

(From our own Correspondent.)

THE ULSTER MEDICAL SOCIETY.

THE annual meeting of this Society was held in the Belfast Museum on July 18th, Dr. Esler in the chair. The report of the Council, read by the secretary, Dr. Macaw, showed that the Society, judged alike by the amount of work done at the meetings and by the numbers attending, had been during the past session in a most vigorous condition. The treasurer's statement indicated a substantial balance in hand. From the report of the librarian, we learn that a considerable sum of money has been spent in purchasing the most modern standard works on medicine. The following office-bearers were elected for the ensuing year:—President: Dr. Burden. Vice-Presidents: Dr. John W. Byers and Dr. J. A. Lindsay. Secretary: Dr. Macaw. Treasurer: Dr. O'Neill. Librarian: Dr. S. Smith. Council: Dr. O'Connell, Professor Dill, Dr. Dempsey, Dr. Bigger, Dr. Mackenzie, and Dr. Calwell. The President, Dr. Esler, who has been instrumental in procuring the portraits of those who have in former times occupied the chair of the Ulster Medical Society, then gave an interesting biographical sketch of Professor Gordon, who in 1856 had been president of this Society, and said he hoped to present his portrait at the next meeting of the members.

THE ROYAL HOSPITAL.

A large meeting of working men was held last week in the hospital to hear the recent correspondence with the city members in reference to the Truck Act. Mr. Sexton, M.P., telegraphed: "The Attorney-General replied, 'Not illegal to collect for the hospital without written consent.'" Another letter had also been received from the same member of Parliament, in which he stated: "The answer of the Attorney-General was plainly to the effect that voluntary contributions may be legally made without written consent, provided that the payment of the contribution is not made a condition to obtain employment." The meeting then proceeded to consider how they might take steps to increase the contributions of the working classes to the funds of the hospital, and, after considerable discussion, it was agreed that each of the firms whose *employés* already contribute to the Royal Hospital should be requested to appoint one of their contributing *employés* as a representative on the committee to be formed for increasing the support to the hospital. The first meeting is to be held early next month. It was also agreed that this new committee and the Board of Management should meet together.

Belfast, July 25th.

PARIS.

(From our own Correspondent.)

POISONING BY ARSENIOUS ACID.

AT a recent meeting of the Academy of Medicine, Dr. Vidal of Hyères related the case of a patient who came under his observation with the symptoms corresponding to those of the malady known by the name of "acrodynia." Dr. Vidal attributed the malady to a slow intoxication of the system by arsenious acid contained in the wine sold to the public by a wine merchant at Hyères, who was lately convicted and condemned by the Tribunal Court to a heavy fine and the expenses of the trial. The whole of the wine was seized, and was found to contain from one to five milligrammes of arsenic per litre. A regular epidemic had been prevailing among the inhabitants of Hyères, but the doctors were puzzled as to the real nature of the malady, as the symptoms were very obscure, resembling nothing within their experience. In the patient under notice Dr. Vidal observed four distinct stages of the disease: (1) gastric troubles; (2) diarrhœa; (3) an eruption on the skin and on the mucous membranes; (4) acrodynia—that is to say, troubles of sensibility and of motility in the limbs, accompanied with swelling &c.; in a word, a morbid condition analogous to that described in the classical work of Valleix, and more recently by Dr. Emile Vidal, the well-known dermatologist, in the "Dictionnaire Encyclopédique des Sciences Médicales." According to these authors, acrodynia is a general epidemic affection, rarely observed in a sporadic form, and is characterised by pains and numbness in the limbs, particularly in the lower ones; by digestive troubles, erythematous spots, and more rarely by a blackish tint of the epidermis. Extensive epidemics of this condition have been observed in Paris, but the pathological anatomy and the etiology of the affection have never been properly elucidated. It has been attributed to the influence of the nervous system, but Dr. Vidal of Hyères denies the existence of acrodynia as a special malady, and sees in the epidemics described only the manifestations of arsenic poisoning by the presence of this substance in food and drink. The physician of Hyères asks whether the affection in question may not be compared to the intoxication by metallic salts in general, so well described by Dr. Théophile Roussel in his treatise on Pellagra.

PARADOXICAL DEAFNESS.

Professor Bouchard presented, at a recent meeting of the Academy of Sciences, in the name of its author, Dr. Boucheron, a very curious note on paradoxical deafness ("surdité paradoxale"), or paracousis Willisii. The author stated that in this deafness the patient is deaf for speech, in an isolated room, in silence; nevertheless, he hears the same speech in the midst of noise, in a carriage, on a railway, in the street, and generally in places which are traversed by multiplied sounds. Paradoxical deafness, which is grave, progressive, and sometimes hereditary, is caused by compression of the labyrinth; it is one of the forms of otopiesis, and is a semi-deafness for the harmonies of speech. If decompression of the labyrinth can be effected by the operation of the moving of the stirrup, the patient recommences to hear in silent places as much as in noisy ones. Ordinary and less powerful means of labyrinthic decompression are, on the contrary, inefficacious, and they

even sometimes augment the compression and the deafness, because they are powerless for moving the stirrup already fixed in the position of compression. Of fifty-two operations for moving the stirrup for the different forms of deafness by otopiesis, Dr. Boucheron practised the operation nine times for paradoxical deafness, with good results in the nine cases, which theoretically were to be foreseen.

GENERAL BOULANGER.

The last bulletin issued two days ago respecting General Boulanger, whose case was reported in THE LANCET of last week, states that, complications having disappeared, all danger appears to be removed and recovery is ensured. The General, having been authorised by his medical attendants to quit Count Dillon's house at Neuilly, in whose park the duel took place, has removed to his own apartments in Paris, to which he was driven in his carriage without experiencing any inconvenience.

Paris, July 24th.

INDIA.

(*From a Correspondent.*)

REPORT OF THE CHEMICAL ANALYST, BOMBAY.

THE report for 1887, though devoid of any special interest, contains an exhaustive notice of the chemical operations effected during the year. There were 1548 cases of a medico legal nature reported upon. There was an unusually large number of samples of water sent for analysis and report, and the Tariff Act imposed on Mr. Lyon additional work in view to ascertaining the real alcoholic strength of all imported potable spirits. The medico-legal cases consisted of suspected poisoning of human beings and suspected cattle poisoning. Arsenic and arsenical substances were, as usual, the poisons most extensively used—in fact, half the number of cases were due to arsenic. Opium comes next and was fatal in all the cases, and, with one exception, it was self-administered. Two cases only of poisoning by strychnine are recorded, and, strange to say, in these two cases "the poison was used by the children of police constables, who extracted it from their fathers' bags." It would appear that this poison is given to policemen to destroy dogs with, and it was due to carelessness on their part that mishaps occurred. A large quantity of commissariat stores was analysed, and these consisted of beer, porter, tea, sugar, &c. In one of the concluding paragraphs Mr. Lyon gives the result of some experiments made for the purpose of obtaining a highly concentrated fortified lime-juice. Besides the above, there were a large number of analyses made for the Customs and Excise departments of imported alcoholic liquors, petroleum, indigenous spirits, opium, &c. It would appear that some specimens of country liquors contained copper.

IMPORTING CHOLERA INTO BOMBAY.

The native captain of the steamship *Bhowanaghar* was recently fined 200 rupees for having had cases of cholera on board during the voyage from Bhowanaghar to Bombay, and failing to report them in due course, which a section of Act 10 of 1887 bound him to do. It would appear that about 200 passengers embarked at the former port, but some of them were sent back on shore, as they were actually suffering from cholera. During the voyage three persons died, and their bodies were consigned to the sea. Of the passengers landed in Bombay, some five or six are said to have died of cholera. The accused failed to report the deaths that had taken place, as also to inform the medical officer of health for the port that there were passengers on board who were suffering from an infectious disease. It was a case calling for condign punishment.

RECENT APPOINTMENTS.

Mr. C. H. Joubert, M.B., F.R.C.S., has been appointed to officiate as professor of midwifery and obstetric physician to the Eden Hospital, Calcutta, vice Dr. R. Harvey, proceeded on furlough. Mr. J. B. Lyon, M.R.C.S., L.S.A., F.C.S., F.I.E., has been appointed to officiate as principal of the Grant Medical College, Bombay, vice Dr. Vandyke Carter, proceeded on leave. Mr. G. Waters, L.R.C.S. and L.R.C.P., to act as Professor of Medicine, Clinical Medicine, and Hygiene, and first Physician to the Jamsetjee Hospital, Bombay, vice Dr. Carter; Mr. R. Manser, M.R.C.S., L.S.A., to act as Professor of Physiology, and second physician to Jamsetjee Hospital, vice Mr. Waters; and Mr. H. P. Dimmock, M.R.C.S., L.R.C.P., to act as Professor of Pathology and third physician to Jamsetjee Hospital, vice Mr. Manser. Mr. F. F. Perry, M.R.C.S., L.R.C.P., has been appointed to officiate as Professor of Ophthalmic Surgery, vice Dr. R. C. Sanders, proceeded on furlough.

Bombay, July 3rd.

THE SERVICES.

Surgeon-Major Hayes, attached to the Egyptian Army, has passed the examination, with honours of the highest standard, in Arabic, and thus becomes entitled to the sum of £100.

The death of Surgeon E. Tully, Bombay Medical Service, from fever, is announced from Burmah.

Sir Frederick Abel, C.B., F.R.S., who has held the office of chemist of the War Department since its creation in 1854, has been relieved of the routine duties connected with the department, and has been appointed President of a Special Committee on Explosives just established by the Government, which includes Professor Jas. Dewar, F.R.S., and Dr. A. Dupré, F.R.S., chemical adviser to the Explosives Department of the Home Office, with Captain Thompson, R.A., as secretary. The senior assistant chemist of the War Department, Dr. W. Kellner, succeeds to the charge of the chemical establishment in the Woolwich Arsenal.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major William Riddell Brunton, 1st Surrey Rifle Volunteer Corps, to be Surgeon-Major, ranking as Lieutenant-Colonel (dated July 25th, 1888).

ADMIRALTY.—Surgeon John G. Harries, to be Surgeon and Agent at St. David's Head (dated July 21st, 1888).

ARTILLERY VOLUNTEER CORPS.—1st Cheshire and Carnarvonshire: William Griffith Owen, M.B., to be Acting Surgeon (dated July 21st, 1888).—3rd Volunteer (Duke of Cornwall's) Brigade, Western Division, Royal Artillery: Acting Surgeon A. Hodge resigns his appointment (dated July 21st, 1888).

ENGINEER VOLUNTEER CORPS.—2nd Gloucestershire (the Bristol): Surgeon J. Knill is granted the honorary rank of Surgeon-Major (dated July 21st, 1888).

ROYAL COLLEGE OF PHYSICIANS.

THE Quarterly Comitia of the College of Physicians took place on the 26th inst., Sir Andrew Clark, Bart., President, in the chair.

The President announced that, in compliance with the request of the Conjoint Committee, the Registrar and himself had duly appeared before the Royal Commission for the University of London. He alluded to two important facts which were stated by the Registrar in his evidence—viz., that in 1834, before a Select Committee of the House of Commons, several eminent physicians had recommended that the College should have the power of granting degrees in medicine; and that, in 1858, the College voluntarily gave up its powers to confer the right to practise in London or its vicinity, whilst, at the same time, the Universities acquired the power of granting licences to practise.

Dr. Arlidge was nominated Milroy lecturer.

Dr. Longstaff was admitted a Fellow of the College. Drs. Sinclair Coghill, Leith Napier, and F. R. Walters were admitted to the Membership.

The annual reports of the Library Committee and the Curators of the Museum were read.

The quarterly report of the Finance Committee was read and adopted.

Communications were read from the General Medical Council, the Board of Trade, and the College of State Medicine.

In accordance with the recommendation of the Committee of Management, the Alfred Hospital, Melbourne, was

included in the list of colonial hospitals recognised by the Examining Board in England.

The following gentlemen were elected to the offices named:—*Censors:* Drs. Wilks, P. W. Latham, Hughlings Jackson, and Broadbent. *Treasurer:* Sir Dyce Duckworth. *Registrar:* Sir Henry Pitman. *Harveian Librarian:* Dr. Munk. *Assistant Registrar:* Dr. Edward Liveing. *Curators of the Museum:* Drs. Wegg, Dickinson, Cayley, and Norman Moore. *Finance Committee:* Sir Edward Sieveking, Dr. Fincham, and Dr. Robert Martin. *Examiners:* Chemistry and Chemical Physics: Dr. Ralfe, Mr. William Foster, Dr. W. J. Russell, Dr. August Dupré, and J. M. Thomson, F.C.S. Materia Medica, Medical Botany, and Pharmacy: Drs. F. Taylor, Tirard, D. B. Lees, Murrell, and Isambard Owen. Elementary Physiology: Drs. V. D. Harris and C. S. Sherrington. Physiology: Drs. Allchin, Wooldridge, and Arthur Gamgee. Osteology and Anatomy: Dr. Herringham and Mr. Henry Morris. Medical Anatomy and Principles and Practice of Medicine: Drs. W. H. Stone, O. Sturges, H. G. Sutton, Cheadle, Pye-Smith, Sir Dyce Duckworth, Bastian, Whipham, T. H. Green, and Sidney Coupland. Midwifery and Diseases peculiar to Women: Drs. Priestley, Gervis, Galabin, and Champneys. Surgical Anatomy and Principles and Practice of Surgery: Mr. G. Pollock, Sir William Mac Cormac, Mr. Morrant Baker, and Professor Humphry. Public Health: Drs. Thomas Stevenson, Edward Ballard, Thorne Thorne, and W. H. Corfield.

It was moved by the Treasurer, seconded by Dr. Dickinson, and resolved, that on the occasion of the Harveian Oration on St. Luke's Day (Oct. 18th) in each year the Fellows be invited to attend in their academic robes and afterwards dine in the College. It was pointed out that both these formalities used to be observed, but that they had died out, the last Harveian dinner being in 1825.

On the motion of the Registrar, it was resolved that a committee be appointed (seven nominated by the College of Physicians and seven by the College of Surgeons) to report as to the application, maintenance, and management of the new building now in course of erection on the Embankment. Sir Dyce Duckworth, Drs. Burdon Sanderson, Pye-Smith, N. Moore, Stevenson, Brunton, and Stone were nominated to serve on this committee.

On the motion of Dr. Farquharson, seconded by Dr. B. Yeo, it was resolved to appoint a committee to consider the Library accommodation and arrangements.

Obituary.

GEORGE THOMPSON GREAM, M.D.

ON July 20th died, at the age of seventy-six, one who for a long time was a most prominent member of the profession at the West-end of London. Dr. Gream was the son of a Sussex clergyman; his eldest brother commenced practice at Tunbridge Wells in 1830 and died some years ago, and in 1836 Dr. Gream started on his successful career as an accoucheur. They came of a very handsome family; Mr. Arthur Stone, the nephew of Dr. John Clarke and Sir Charles Clarke, married Dr. Gream's sister. Until Dr. John Clarke began to practise, in 1846, Dr. (then Mr.) Gream assisted Mr. Stone. After this, Dr. Gream depended on his own merits, and rapidly obtained a very considerable midwifery practice, which he pursued until about ten or fifteen years ago, when he retired from professional work. Dr. Gream became a Member of the College of Surgeons of England in 1836. In 1850 he received the degree of M.D. from the University of Aberdeen. In 1859 he became a Member, and in 1867 a Fellow, of the College of Physicians of London.

On Sir Charles Locock's retirement Dr. Gream took a leading part in the West-end midwifery practice, which he pursued with great professional success. With his patients he was very popular. He attended the Empress Victoria, Princess Royal of England, on the occasion of the birth of her third child, Sir Charles Locock being in attendance at the birth of the second. Dr. Gream was for many years physician-accoucheur to Queen Charlotte's Hospital, and for some time after he had retired from that office he gave much attention to the affairs of the hospital. He was physician to H.R.H. the Princess of Wales. He received his medical education at St. George's Hospital, and for a short time lectured at the Grosvenor-place Medical School. On the retirement of Mr. Stone as a lecturer, he presented his museum, which his uncles, Dr. John Clarke and Sir Charles Clarke, had helped to make, to St. George's Hospital. Dr. Gream was an Honorary Fellow of the King and Queen's College of Physicians in Ireland, and a Fellow of the Royal Medical and Chirurgical Society, as well as of other societies. His publications were: "Remarks on the Diet of Children and the Distinction between the Digestive Powers of Infants and Adults," "On the Employment of Chloroform in Midwifery," "On Sterility in the Female," "On the Use of Nux Vomica in Hay Fever," and "Cases of Vascular Tumours of the Female Urethra cured by Nitric Acid."

Many of the deceased gentleman's old professional friends will miss his cheerful and kindly greetings, and his patients will lament the loss of a most liberal and valued attendant. On Tuesday in last week he was seized with hemiplegia, and died, as stated above, on Friday, the 20th. He married twice: his first wife was Miss Oddie; his second, whom he married in 1873, and who survives him, was Lady Gooch, the widow of Sir Edward Gooch, the seventh baronet of Benacre Hall, Suffolk. He leaves no children.

SALVATORE TOMMASI.

ITALIAN MEDICINE has lost one of its leading representatives in this eminent Neapolitan physician, who died at Naples on the 13th inst., in his seventy-fifth year.

Salvatore Tommasi was a native of Roccaraso in the province of Aquila, and after a brilliant course of general and medical study at the University of Naples, he gave himself with ardour and perseverance first to physiology and then to clinical observation. Like nearly every one of his contemporaries, whether in the legal, the medical, or the political sphere, he shared the patriotic aspirations aroused by the great upheaval of 1848, and became a prominent member of more than one revolutionary club organised for the dethronement of the Bourbons. He had by this time become Professor of the Practice of Physic in the University of Naples, and had been twice in succession elected a deputy to the Neapolitan Legislative Chamber; but in 1849 he was politically so compromised as to be obliged to flee the country. He found an asylum, like so many other patriots, in the subalpine capital, and in the congenial Turinese atmosphere he prosecuted his scientific studies till, ten years later, Italy achieved her unity and independence. On the annexation of the two Sicilies to the Italian kingdom he was elected member of Parliament for the constituency of Cittaducale, and nearly four years later, on March 13th, 1864, he was nominated Senator. From 1860 he had filled the post of lecturer on the principles and practice of medicine in the University of Pavia till 1865, when he was transferred to the post of clinical physician-in-chief to the Neapolitan School, a chair which he held with yearly enhanced honour till within a short time before his death.

Professor Tommasi was an unwearied worker, and laboured, through every channel by which he could make his influence felt, to heighten the standard of professional efficiency among his compatriots. His writings were always eagerly awaited, not only in Italy, but on the Continent generally, and one of them, entitled "Rinnovamento della Medicina in Italia" (Renewal of Medicine in Italy), went through many editions. Among his other publications may be mentioned his "Prolegomena di Clinica Medica," his "Sommario della Clinica Medica di Pavia," and, above all, his "Lezioni Cliniche" (Naples, 1881), embodying the results of those observations and prælections at the bedside which made his clinique so attractive to young students, not only of Italy, but of many other nationalities. He was too deeply absorbed in scientific and professorial work to attend the Senate frequently; but when he did contribute to its discussions—as, for example, on the first "Codice d'Igiene" presented by the Prime Minister Lanza (himself a medical man) and summarised for the House by Professor Burci, the eminent Florentine surgeon—it was with authority, independence, and effect. A grave domestic loss, however, so told upon his bodily and mental energies that he with-

drew into strict privacy in Naples, finding his chief solace in the steady prosecution of medical study.

He was President of the Royal Medico-Chirurgical Academy of Naples, Fellow of the Pontonian Academy, and Corresponding Member of the Royal Academy of Sciences of Bologna and of numerous learned societies abroad. His funeral was largely attended and singularly impressive. The Senatus of the Neapolitan University, the representatives of the various scientific, literary, and artistic bodies of the city, the municipality, the delegates from the other Italian schools, the students, and a long train of fellow-citizens, attested the honour and affection in which the deceased physiologist and physician was held. Over his grave *oraisons funèbres* were pronounced by the Rector of the University, Professor Cantani (the representative of the syndic), and several of his students, among whom those from his native mountains in the Abruzzi bore an academic standard inscribed with the words that formed the scientific faith of their master—"O Evoluzione o Miracolo" (either evolution or miracle). The coffin was lowered into the grave by students of the sixth medical year, and thereafter a telegram from the Prime Minister, Signor Crispi, was read, giving expression to the great loss Italy and Italian science had sustained by the death of Salvatore Tommasi.

PROFESSOR RÜHLE.

More than a passing notice is due to this able and learned clinician of the University of Bonn, whose death on the 11th inst. has been announced.

Hugo Rühle was born on Sept. 12th, 1829, at Liegnitz, graduated in 1846 at Berlin University, and in 1853 settled in that school as *privat docent*. In 1857, his great scientific accomplishments and tutorial success led to his appointment as Extraordinary Professor and Director of the Medical Clinique at Breslau. Transferred in 1860 to Griefswald, he worked there as Ordinary Professor till 1864, when he was called to Bonn, where he gave the highest proofs of his skill and acumen in investigation and in teaching. He rose to be Director of the Medical Clinique of the school, as well as Geheim-Medicinal-Rath; while his papers read at scientific congresses or contributed to the professional journals made him honourably appreciated far beyond Rhenish Prussia. Of his special publications, the best known are those on the diseases of the thyroid gland and on pulmonary phthisis, subjects on which he spoke and wrote with the authority of an original and cautious investigator.

Medical News.

COLLEGE OF PHYSICIANS IN IRELAND.—At the July examinations the following obtained the Licences in Medicine and Midwifery of the College:—

Medicine.—Patrick Carney, Robert George Christy, W. H. Gimblett, Connel Hoey, H. Hutchinson, Arthur M'Gauran, Henry Monsarrat Rainsford, Benjamin Poyntz Young.

Midwifery.—W. H. Gimblett, D. M'Kee, H. Monsarrat Rainsford, J. Moriarty Tidmarsh.

The undernamed was admitted a Member:—

Henry Michael O'Hara.

CONJOINT SCHEME BETWEEN THE COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The following have passed the Second Professional Examination:—

T. J. Conolly, Nathaniel G. Cookman, E. Cosgrane, R. Dalton, G. W. Dawson, N. W. Devlin, T. G. Dillon, B. G. Elliott, E. G. Fenton, A. N. Herron, G. W. Joyce, A. E. Keeble, S. Keogh, T. L. Lynch, G. Moorhead, T. K. Mulcahy, A. J. M'Munn. E. W. M'Quaid, W. M. Meeke, W. E. More, C. M. O'Brien, G. N. D. Oakes, J. P. Quinn, J. C. Ryan, L. T. Whelan, G. F. Woodroofe, R. B. Wright, and R. S. Young.

MEDICAL MAGISTRATE.—H. J. Strong, M.D. St. And., M.R.C.S., has been placed on the Commission of the Peace for the borough of Croydon.

VACCINATION GRANT.—Mr. Horace Lowther of Ventnor has been awarded the Government grant for efficient vaccination in his district (third time).

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The Library of this Society will be closed during the month of August.

VICTORIA HOSPITAL FOR CHILDREN.—The Silver Fête at South Kensington has added nearly £5000 to the funds of this hospital.

A HANDSOME GIFT.—An anonymous friend has handed to the founder of the Mission to Deep-sea Fishermen a check for £3500, to defray the cost of building and equipping another hospital mission ship.

DUNDEE ROYAL INFIRMARY. — Miss Symers, of St. Helens, has contributed £1000 to the endowment fund of the Convalescent Home, Barnhill, in connexion with the above hospital.

CENTENARIAN. —At Birtley, co. Durham, Mary Long has just died at the age of 110 years. She leaves a sister aged 104 years, and a brother died a few months ago aged 100 years. The two who have died were blind; as is also the surviving sister.

INFECTIOUS DISEASE HOSPITAL FOR GALGATE.—Mr. G. T. R. Preston, of Ellel Grange, has offered to provide, at his own expense, an infectious disease hospital for Galgate. The building is to have a strong wooden framework, covered on the outside with galvanised corrugated iron.

DIPHTHERIA AT CHELMSFORD. — Diphtheria, almost in an epidemic form, but of a mild type, is reported to have broken out in this town. The disease has appeared in as many as thirteen families. A searching investigation of the causes of the outbreak is being made. It appears that the district affected is almost confined to Moulsham.

NEW FRENCH HOSPITAL.—On Saturday last, M. Waddington, the French Ambassador, laid the foundation stone of the new building to be erected in Shaftesbury-avenue. The total cost of erecting and fitting up the hospital is estimated at about £20,000, of which £14,000 have been subscribed. The building, when completed, will provide room for fifty-five beds, and is expected to be ready for occupation some time during next year.

WATER SUPPLY OF EDINBURGH AND DISTRICT.—The members of the Water Trust, in consequence of the enormously increased demand, and in anticipation of the necessity at no distant date for a large augmentation of the existing water supply of Edinburgh and district, are making inquiries into the probable sources from which such additional supply may be obtained, in order to fulfil their obligation to maintain a constant service.

CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, MANCHESTER.—A new wing which has been recently added to the above institution was formally opened on the 16th inst. by Mr. Herbert Philips. The new building provides excellent accommodation for the nursing staff. In consequence of the additional space gained, the number of beds available for the reception of patients has also been increased.

BETHLEM ROYAL HOSPITAL.—The following candidates passed the examination in Psychological Medicine held on July 23rd and 24th:—Jane Elizabeth Waterston, M.D. Brux., L.K.Q.C.P.I., L.M., L.R.C.S. Ed., of the Cape; Henry John Macevoy, M.R.C.S., L.R.C.P., B.Sc. Lond., of Bethlem Royal Hospital; William Dobree Calvert, L.R.C.P., M.R.C.S. Ed., of St. Luke's Hospital; and Edwin Goodall, M.B. and B.S. Lond., M.R.C.S., L.R.C.P., of Bethlem Royal Hospital.

EXTENSION OF THE GENERAL INFIRMARY, LEEDS.—At the weekly meeting of the governors, held on the 20th inst., the chairman announced several generous donations to the fund towards the extension of the institution, which, with Colonel North's gift of £5000, brought up the total subscriptions to £15,000. It was resolved to make arrangements to commence the erection of an additional wing on the vacant ground to the east of the infirmary, to be called the Isolation Ward.

KENT MEDICAL BENEVOLENT SOCIETY.—Established in the year 1787 for the relief of disabled members or widows or orphans of deceased members, this Society has now a funded capital of between £8000 and £9000. The 102nd annual meeting was held in the library of the Kent and Canterbury Hospital on Wednesday, the 11th inst., under the presidency of Dr. Lochee, consulting physician to the Hospital, and grants varying from £20 to £50 were made to eight widows and one daughter of deceased members.

QUADRUPLETS.—Mrs. Norman, the wife of a painter living at Fratton, near Portsmouth, gave birth on Sunday last to four children, of whom only one is alive. Mrs. Norman, who is forty years old, is the mother, in all, of twenty-one children. She had previously had twins and a triplet. On the latter event she received the Queen's bounty.

QUACK DOCTORS AND THEIR PAMPHLETS.—At the Liverpool City Police Court, on Monday, the stipendiary magistrate sent a man to prison for fourteen days with hard labour—intimating that in any future similar case he would inflict a sentence of one month—for distributing in the streets objectionable pamphlets of a firm of quack doctors carrying on business at Pembroke-place. The prosecuting solicitor stated that in these cases the maximum fine had proved nugatory. At the same hearing a man was fined 20s. and costs, or fourteen days, for affixing in urinals bills advertising the same business.

KIOSKS IN LONDON.—Under the auspices of the International Hygienic Society, two kiosks for ladies were opened in London on Monday—namely, at 81, Park-street, Grosvenor-square, and 4, Grosvenor-street. They are provided with writing and reading-rooms, and parcels may be left. The Society contemplate establishing altogether in various parts of the metropolis fifty similar places for ladies exclusively; about 100 in the City and other business centres for men; and swimming and shower baths in the east of London, where also substantial refreshments will be obtained. It is an experiment which has been successful in several continental cities, and the Society propose to supply a want long felt in the metropolis.

THE PURIFICATION OF THE THAMES.—On the 24th inst., the Society of Engineers and a large company of experts visited the new precipitation works at the Barking outfall sewer, now erecting under the authority of the Metropolitan Board of Works for the deodorisation of the sewage which falls into the Thames from the northern parts of London. The new works will cost for the general work upwards of £400,000, and the engines and machinery are to cost more than £42,000, so that the first cost will be little less than half a million sterling. The enormous character of the works may be estimated by the fact that there are to be four engines at work, each lifting at a stroke 200 gallons. The "sludge" tanks are in three classes, one series being in reserve for stormy weather, when the fleet of vessels cannot go out with their cargoes. The works extend over some fifty acres. The sewage to be dealt with here amounts to 90,000,000 gallons a day, and the precipitation mineral—lime is named—will be 23 tons a day.

MEDICAL NOTES IN PARLIAMENT.

Victoria University Bill.

IN the House of Lords on the 19th inst., the report of an amendment in the shape of a new clause was received, and the Bill ordered for third reading.

Factory and Workshops Act (1878) Amendment (Scotland) Bill.

On the motion of the Earl of Aberdeen, this Bill was read a third time and passed.

New Cemetery at East Ham.

In the House of Commons on the 19th inst., in reply to Mr. Theobald, Mr. Matthews said that he had sanctioned the opening of Woodgrange-park cemetery at East Ham. After a full inquiry he had come to the conclusion that there were no sanitary objections to justify the withholding of his sanction, which he had only given under specially stringent regulations amply sufficient to protect the public health.

The Death of a Patient at Colney Hatch.

Mr. W. Redmond asked the Secretary of State for the Home Department what was the result of the inquiry by the Lunacy Commissioners into the death of the man Stickley at Colney Hatch Asylum.—Mr. Matthews said that the Committee of Visitors had made a searching inquiry, which had been reviewed by the Commissioners. The result was that Stickley's injuries were believed to have occurred after he had been received into the asylum, but there was nothing to suggest any suspicion of violence or rough usage on the part of any officer or attendant. The Commissioners had censured the medical superintendent severely for laxity in his examination of the patient, and for omissions in the notice of death to the coroner. They had also blamed the assistant medical officer, and had recommended the dismissal of two attendants in the bath-room, who left the patient before he was completely dressed. The Commissioners were of opinion that further inquiry would not lead to any good result.—In reply to Mr. Childers, Mr. Matthews promised to consider the question of transferring to some other institution the principal medical officer, who had been so severely censured; and also whether the report of the Commissioners should be laid upon the table of the House.

English University Colleges.

On the 20th inst., in reply to Sir John Lubbock, Sir W. Hart-Dyke stated that the Government were prepared to give some assistance to the English University Colleges, but the mode and principles of distribution raised very difficult questions, which would necessarily take some time to arrange.

The Execution of Criminals.

On the 23rd inst., Mr. Brookfield asked the Secretary for the Home Department whether his attention had been drawn to the occurrence from time to time of unfortunate and lamentable blunders in the execution of criminals; whether he was aware that in the case of Robert Upton, executed at Oxford on the 17th inst., the responsible medical officer stated that the head of the culprit was nearly torn off owing to the length of the drop; whether his attention had been called to Dr. Marshall's contrivance for producing instantaneous death with a drop of only three feet; and whether he could now state how soon the report of the Committee on Capital Punishment would be printed and issued.—Mr. Matthews, in reply, said that he was informed by the Prison Commissioners that, though these deplorable accidents do occur from time to time, they are by no means common, two only having occurred since 1878. Dr. Marshall's suggestion was known to the authorities, but it was not thought that its adoption would lead to the expected result. The report of the Committee had been made, and he should be happy to communicate it to his hon. friend.—In answer to a further question put by Mr. Brookfield, Mr. Matthews said that the Departmental Committee appointed to inquire into the matter had gone deeply into the subject, but he did not think they had extended the scope of their inquiries so far as to consider the merits of the electrical method of executing criminals.—In answer to Mr. Childers, Mr. Matthews said there would be no objection to lay the report of the Departmental Committee upon the table if hon. members desired its production.

Colour Blindness in Seamen.

In reply to Sir G. Baden-Powell, Sir M. Hicks-Beach said that arrangements were already in existence under which certain persons in the mercantile marine might be examined for colour blindness. The railway companies had also taken steps to examine their servants in reference to colour blindness.

The Indian Medical Service.

In the House of Commons on Thursday, Dr. Tanner asked the Under Secretary of State for India if it is the case that the course of special instruction and ultimate examination hitherto required and passed by officers of the Indian Army Medical Service is to be abolished; whether the statement of the officer at the head of the Medical Service concerning the proposed change in the Bengal Presidency, quoted by the *British Medical Journal*, July 21st, 1888, is correct—viz., that it is no longer necessary; what reasons are given for such change by the Indian Government; and whether it is intended to substitute any other course for that it is proposed to abolish.—Sir John Gorst said: In reply to paragraphs 1 and 2, no such decision has been arrived at. The matter is still under the consideration of the Secretary of State and the Government of India. The reason given in favour of the change is that the special instruction can be given better and at less expense in India. If the present course were abolished, a course of special instruction would be given in India.—Dr. Tanner: Is it not a fact that in the schools in the three Presidencies there were neither laboratories nor other arrangements which are absolutely necessary for medical education? Would not considerable expense have to be incurred in making the proposed change? Also is it not a fact that the gentleman at the head of the medical service there is better known for his homœopathic efficiency than for his medical services?—Sir John Gorst said he had given all the information in his possession.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AVARNE, A. B., L.S.A., F.C.S., has been appointed Medical Officer and Public Vaccinator to the Blaenavon District, Mons.

BARCLAY, W. M., L.R.C.P.Lond., M.R.C.S., has been appointed Assistant Surgeon to the Bristol General Hospital, vice Penny, resigned.

BEALES, T. W. L., M.R.C.S., L.R.C.P.Lond., has been appointed Honorary Medical Officer to the Great Yarmouth Hospital, vice D. Meadows, M.R.C.S., L.S.A., retired.

FEENY, J. A., M.R.C.S., L.R.C.P.Lond., has been appointed Resident Surgeon to the Convalescent Home, Mablethorpe, and Medical Officer to the Court Book in Hand Foresters.

GILL, JOHN, L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of the Guilsfield District, Llanfyllin Union.

HUGHES, H. G., L.R.C.P., L.R.C.S.Edin. and L.M., has been appointed Medical Officer to the Carnarvonshire No. 3 District of the Bangor and Beaumaris Union.

HUNTER, E. J., L.R.C.P.Edin. and L.M., L.F.P.S.Glasg. and L.M., has been appointed Medical Officer for the Town (Gosport) District.

LLOYD, J., M.B.Durh. and M.S., F.R.C.S.Eng., L.S.A., has been appointed Visiting Surgeon to the Birmingham Workhouse Infirmary.

ODELL, THOMAS, M.R.C.S., L.S.A., has been appointed Medical Officer to the Third District of the Hertford Union.

PRICE, E. C., M.B.Edin. and C.M., has been appointed Medical Officer for the Carnarvonshire No. 1 District, and for the Workhouse, Bangor and Beaumaris Union.

PRICHARD, R., M.D.Glasg., M.B. and C.M., has been reappointed Medical Officer of Health for the Cardiff Rural District.

SANDERS, JOHN WM., M.D., F.R.C.S.Eng., Dip. Pub. Health, Lond., has been appointed Medical Superintendent of the St. George-in-the East Infirmary.

SMITH, C. E., M.D. St. And., M.R.C.S., L.S.A., has been appointed a Medical Officer of the Worthing Infirmary and Dispensary, vice J. Edward Grinfield-Coxwell, resigned.

SMITH, W. J., L.R.C.P., L.R.C.S.Edin. and L.M., has been reappointed Medical Officer to the Rawmarsh District of the Rotherham Union.

THOMAS, J. T., L.R.C.S., L.M.Ed., L.K.Q.C.P.I., has been appointed Honorary Surgeon to the Newport and County Infirmary, Newport, Mon.

WARD, G. S., L.R.C.P.Edin. and L.M., L.R.C.S.Edin. and L.M., has been appointed Medical Officer to the Fifth District, Hertford Union.

WEBB, J. B., M.R.C.S., L.R.C.P.Lond., has been appointed House Surgeon to the Brecon Infirmary, vice J. R. Raywood, resigned.

WILTON, J. P., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Gloucester Urban and Port Districts.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN.—Resident House Surgeon, for six months, or longer by re-election. Salary at the rate of £30 per annum, with board and residence.

BRISTOL GENERAL HOSPITAL.—Physician's Assistant. Board, lodging, and washing in the house. Salary £50 per annum.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Assistant House Surgeon. Salary £20 per annum.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer. Salary £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Senior Resident Medical Officer. Salary £104 per annum, with board and residence in the hospital.

ST. ALBANS HOSPITAL AND DISPENSARY.—A Dispenser. Salary £65 a year.

WEST BROMWICH HOSPITAL.—Locum Tenens for the House Surgeon, during the month of August. £5 allowed for the month.

Births, Marriages, and Deaths.

BIRTHS.

CLARK.—On the 18th inst., at Wisbech, the wife of Arthur W. Clark, M.R.C.S., L.R.C.P.Lond., of a son.

FAUGHT.—On the 15th ult., at Wheatfield, Mowbray, Cape Town, the wife of Deputy Surgeon-General Faught, of a daughter.

MACKAY.—On the 24th inst., at Hornby, Lancaster, the wife of Ian D. Mackay, M.B. and C.M., of a daughter.

SANDBERG.—On the 20th inst., at Liverpool Lodge, Brixton-hill, S.W., the wife of Arthur Sandberg, M.D., of a son.

TUKE.—On the 18th inst., at Chiswick, the wife of Charles Molesworth Tuke, M.R.C.S., of a daughter.

MARRIAGES.

BRYCE—LEEMAN.—On the 18th inst., at St. Mary's Church, Cardenplace, Aberdeen, James Bryce, M.B., of Puckeridge, Herts, younger son of the late James Bryce, of Westbank, Advocate, in Aberdeen, to Millicent, only daughter of Commander Joseph Leeman, R.N.R., of The Holt, Aberdeen.

CALVERT—SMITHERS.—On the 24th inst., at Holy Trinity, Eltham, James Calvert, B.A., B.Sc., M.D. Lond., of Queen Anne-street, to Thérèse Jane, elder daughter of John Smithers, Lemonwell, Eltham, Kent.

CARSON—BOUSTEAD.—On the 6th ult., at Christ's Church, Ahmednagar, by the Rev. E. J. Bowen, Chaplain, assisted by the Rev. J. Taylor, M.A., Surgeon W. P. Carson, M.B., 1st By. Grenadier Regiment, to Frances, second daughter of Surgeon-Major R. Boustead, M.D., F.R.C.S., H.M.'s Indian Army.

CLARKE—HECTOR.—On the 19th inst., at St. Paul's Church, Edinburgh, John Chaundy Clarke, M.R.C.S., of Morley, Yorkshire, to Mary, third daughter of the late Alexander Hector, of Montrose, Forfarshire, N.B.

HORDER—DESPARD.—On the 18th inst., at the Parish Church, Hampstead, Thomas Garrett Horder, M.R.C.S., M.D.Edin., of Cardiff, to Anna Maria, daughter of Major W. F. Despard, 3rd V. B. the Royal West Kent Regiment, of Hampstead-hill-gardens, and of Lacca, Queen's County, Ireland.

O'HARA—OSBORNE.—On the 11th inst., at St. Mary Abbots, Kensington, W., Henry O'Hara, F.R.C.S.I., of Melbourne, to Nina, eldest daughter of George Osborne, of Foxlow, N.S. Wales.

DEATHS.

GREAM.—On the 20th inst., at his residence, The Drive, Hove, Brighton, George Thompson Gream, M.D.

HARCOURT.—On the 18th inst., at Holland-park, Kensington, George Harcourt, M.D. St. And., F.R.C.S. Eng.

ROWE.—On the 17th inst., at Haverfordwest, George Rowe, M.R.C.S., J.P., of Great Hoaten, Pembrokeshire, aged 87.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 26th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 20	29·92	S.W.	62	60	89	66	57	·17	Raining
,, 21	29·91	S.W.	61	57	100	69	57	·06	Cloudy
,, 22	29·92	S.W.	65	60	109	73	58	..	Cloudy
,, 23	29·65	S.W.	63	60	120	71	59	·36	Cloudy
,, 24	29·73	S.W.	63	58	113	71	56	..	Cloudy
,, 25	29·76	S.W.	61	59	76	63	58	..	Raining
,, 26	29·67	S.W.	62	57	117	69	56	·27	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

CHILDREN'S COUNTRY HOLIDAYS FUND.

THE Central Council of the Children's Country Holidays Fund, in presenting their fourth annual report, have the satisfaction of stating that notwithstanding the various claims of a jubilee year their work has continued to steadily increase. During the year, 14,048 ailing London children were sent away at a cost of £9178, of which the parents contributed £2819. The original plan of sending children as guests to cottages (under responsible supervision), where they share the ordinary home life was strictly adhered to, and experience shows it to have been indeed a happy thought, that the London child should see what is the difference between his cramped brick-and-mortar home and the freer simpler life of country children of his own class. The Central Council of the fund appeal for renewed and increased assistance, and we cordially second the appeal to the kindly sympathy of our readers. Contributions should be sent as early as possible to the office, 10, Buckingham-street, Strand, W.C.

Dr. C. Hammond.—A State examination must be passed before permission is given to practise in Switzerland.

ARRESTED DEVELOPMENT OF THE ABDOMINAL WALLS, &c.

To the Editors of THE LANCET.

SIRS,—A case somewhat similar to that reported by Dr. John Buchanan in your issue of the 21st inst. occurred in my practice in 1865, the notes of which, taken at the time, are as follows:—"The fœtus was supposed to be about eight months. The mother is a pluripara; nothing especial occurred in the gestation. The birth was fairly easy, and the fœtus breathed for a few seconds. The length of its entire body was about twenty inches. The head and upper extremities and thorax were well formed and offered no peculiarities for remark. The membranæ pupillares were absorbed. Finger and toe-nails well formed. The lower extremities were less shapely and were the subjects of talipes equinovarus. The anterior abdominal wall was entirely deficient from the ensiform cartilages to less than an inch above the pubes. This was due to the complete absence of the recti muscles and the common integuments. Through this space, covered only by peritoneum, the liver, stomach, spleen, and large and small intestines were visible, and protruded very considerably. The transparent omentum occupied its usual position. The funis and placenta were nearly normal, but the omphalo-mesenteric vessels were unusually distinct.

I am, Sirs, yours faithfully,

Haverstock Hill, N.W., July 25th, 1888. W. GAYTON, M.D., &c.

MORAL LEGISLATION IN FINLAND.

THE Parliament of Finland appears to have attempted some heroic legislation, with the laudable object of solving the social evil and contagious disease questions. Any illicit connexion is to be punished, both parties being fined, the man to the extent of £2, the woman £1. Letting out any place for the purpose of prostitution is to be punished by imprisonment for three years and with loss of civil privileges. The seduction of a woman is also to be punished with three years' imprisonment and the loss of civil privileges. All attempts at seduction, even though unsuccessful, are also punishable. Lastly, a woman who gives herself up to prostitution is made liable to two years' imprisonment. It will be instructive to learn how far this attempt to "make people moral by Act of Parliament" succeeds in effecting its object. One effect of such severe legislation will probably be to induce persons who have contracted venereal disease to conceal it until it is far too late to treat it at all effectually.

Prison Surgeon.—It is certainly to be regretted that the zeal of proselytisers is not more frequently associated with discretion and good taste. But the remedy for the annoyance of which our correspondent complains is not easy to point out.

Mr. J. J. Harding is referred to THE LANCET of July 7th, p. 48.

A FAMILY POISONED BY EATING TINNED SALMON.

To the Editors of THE LANCET.

SIRS,—The following may be deemed of sufficient interest for insertion in THE LANCET.

On Saturday, the 14th inst., about two o'clock, a family named D——, including father (aged forty), mother (forty), Mary Jane (fourteen), Frank (eleven), partook freely of tinned salmon for dinner. During the meal they complained that it tasted nasty, and on turning the bottom part over it was found to be offensive, the tin and its contents being thrown into the ashpit. In two hours and a half after they were all ill with pains in abdomen, vomiting, and purging. They continued in this condition all night, and on Sunday morning at 9 o'clock I first saw them. They were then ill with the same symptoms, collapsed, vomiting incessantly, purged every few minutes with pea-green, bilious stools. No pain on pressure, but abdomen retracted; tongue beefy red, except the girl's, which was furred; pulses thin and rapid; extremities cold; great thirst. Towards night they became even worse; reactionary fever set in, temperature rose to 103° and 104°; girl's pulse up to 140, and boy's scarcely to be counted. During the night the boy became delirious and restless, tossing his arms and body about the bed, and so ill that I thought he would die before the morning. On Monday he continued in much the same condition. By this time the father was getting much worse, lying in a state of extreme prostration; voice gone to a whisper; extremities cold; pulse thin; pinched face; in fact, they reminded one of people suffering from cholera; the mother, whose case was the mildest, showing to-day signs of improvement; less pain, vomiting less, and purging also less. Gradually day by day the symptoms subsided in mother and daughter, pulse fell in number and gained in power, and they expressed a slight desire for food. The father and the boy continued very ill all the week, but on the Friday the father's case improved, and he took a little beef-tea and iced milk, and on Sunday the boy showed signs that the mischief was abating, but the restlessness continued, and during the night in tossing about he fell out of bed, but his delirium was leaving him, and he answered when spoken to in a loud voice, complaining of pain across his stomach. The further history so far has been favourable, with little to record, and to-day (Tuesday) the father has been up and dressed. Boy conscious, but very weak. Mother and daughter dressed, and moving about a little. The only one who escaped was a boy, aged seventeen, who did not touch any of the fish. So ill were they at one time that it was deemed advisable to call in Drs. Gibb and Angus in consultation. The tin, with some salmon in it, was recovered by the authorities, and the contents found to be offensive.

The treatment consisted in opium and bismuth internally, ice to suck, hot bottles to feet and legs, and sinapisms over the stomach and bowels. The father at the worst had four ounces of brandy and iced water, the boy two ounces, in the twenty-four hours. They vomited any milk they took, but towards the end of the week beef-, mutton-, and chicken-tea were retained. They complained of feeling hungry, but dare not eat.

I am, Sirs, yours obediently,

July 24th, 1888. ARTHUR T. WEAR, M.R.C.S., L.R.C.P.LOND.

SNAKE POISONING IN INDIA.

THE returns for 1886 show that 22,134 human beings perished from snake-bite in India. The number of cattle killed by snakes is returned at 2514. It is stated that 417,596 snakes were destroyed, and that 25,360 rupees were paid by Government as rewards for their destruction. The mortality from snake-bite in Bengal is much larger among women than among men. They are usually bitten in the early morning when they go out before daylight, either to fetch wood from the faggot-stack or for some other domestic purpose.

Quæstor.—We do not understand the question in the form in which it is put.

DEAF-MUTES IN THE UNITED STATES.

PROFESSOR GRAHAM BELL, the well-known electrician, has been directing his attention to the way in which the deaf-mutes are cared for in the United States. He finds that the ratio of increase of deaf-mutes in America is out of all proportion to the increase in the rest of the population, this result being due to the fact that the way the deaf and dumb are cared for is absolutely wrong. They are taken, in the majority of instances, from their families very young and are placed in asylums, where they become acquainted with each other to the exclusion of the rest of the world. The consequence is that 95 per cent. of the deaf-mutes intermarry, and that already 33⅓ per cent. of their offspring are born deaf and dumb, and the ratio will go on increasing until, Professor Bell says, an alarming state of things is reached. He suggests that instead of sending them to special institutions where they are shut out from the rest of the world, special teachers should be sent to the mutes in every public school. The cost, he estimates, would not be greater than under the present system, and much advantage would be reaped.

F. G. W.'s question is one which should be addressed to his usual medical attendant.

Anti-quack has not enclosed his card.

THE SWITCHBACK RAILWAY, TOBOGGANING, AND SWINGING.

To the Editors of THE LANCET.

SIRS,—Looking at the great amount of biliousness which the variable weather and the pleasures of the season have thrown upon us during the last few months, and remembering that though thousands may hie to health-resorts and watering-places the toiling millions of London remain, it occurred to me that some good would result could we but supply the languid, melancholy, bilious, and appetiteless among them with some compensation for the benefits enjoyed by the favoured ones who wander afar. Such facilities in the shape of exercise as I, a martyr to biliousness, know from experience are either already at our doors, or could easily be set up and made available for use. I refer to the practice of swinging, and the switchback railway and tobogganing, now in full working order at our three exhibitions. The swing I have found most useful. It increases the respiratory activity, directs to the surface, thus stimulating the liver and dissipating collateral internal congestions. Such faith have I in swings that I would not only advise the promoters of exhibitions to set them up in their grounds, but I go further, and urge every *paterfamilias* in London who has a bit of a garden to do likewise, and use them himself, as well as his children. The effect of the switchback is similar, but more exhilarating, a box seat being particularly lively. On mounting, there is a sense of suppressed nervous excitement, followed by prolonged inspirations, great exhilaration, and a glow to the skin, thus bringing a force of horse, foot, and artillery, as represented by the roused nervous, cutaneous, and local muscular systems, to bear on the liver, stimulating its secretions, and helping the onward flow of the clogged and vicid bile. After trying it, I returned home cheered, refreshed, and with an appetite quite satisfactory. A threepenny return course is, however, of little use, half a dozen or a dozen being necessary.

If you will publish this letter, I think you will confer a benefit on many, and at the same time perhaps do no harm to the exhibitions, so harassed by prolonged bad weather, and so deserving of support and encouragement.

I am, Sirs, yours faithfully,

D. H. CULLIMORE, M.D., M.R.C.P. Lond., F.R.C.S.I.,
Late Senior Physician, N.W. London Hospital.

Welbeck-street, W., July 18th, 1888.

J. A. H.—The most convenient edition of Aretæus the Cappadocian for the English student is that published by the Sydenham Society in 1856. Its editor was that admirable Greek scholar and accomplished physician, Dr. Francis Adams of Banchory, N.B. It gives a carefully constituted text and a faithful rendering from the Ionic dialect of the original into readable English. The Dutch edition by Ermerius, with Latin translation, may also be recommended. For those who have a working knowledge of Italian, Puccinotti's classical version in that language will prove a great treat.

Mr. W. Walsham.—Effingham Wilson, Royal Exchange, London.

Damon.—We will make inquiry.

PLAGUE OF CATERPILLARS.

To the Editors of THE LANCET.

SIRS,—Our neighbours are infested by caterpillars whilst we have hardly any. Our fruit and flowers are good, and our trees not blighted. We attribute this result to the preservation of our wild birds. We will not allow them to be shot or in any way destroyed, and they eat up the caterpillars.

I am, Sirs, yours faithfully,

July, 1888. S. L. M.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Wilks, London; Mr. W. Anderson, London; Dr. Macewen, Glasgow; Mr. C. Hawkins, London; Dr. W. B. Tomson, Luton; Dr. A. Carpenter, Croydon; Mr. Marshall, Hastings; Messrs. Whitehead, Morris, and Lowe, London; Mr. W. H. Simmonds, Edinburgh; Dr. Higham Hill, London; Mr. A. T. Wear; Mr. Swinton, Blackheath; Mr. Talbot, London; Dr. McCall, Morecambe; Professor Wallace, Liverpool; Mr. Lake, Barnes; Dr. Pearse, London; Mr. Stamford, Tunbridge Wells; Dr. C. Taylor, Windermere; Mr. A. C. Dixey; Messrs. Acton and Co., Notts; Mr. J. C. Richardson, Wandsworth; Messrs. Wood and Co., New York; Mr. F. Page, Newcastle-on-Tyne; Mr. Lawson Tait, Birmingham; Mr. C. Hancock, London; Messrs. Woodhouse and Ranson, London; Dr. Magregor, Wellington, N.Z.; Mr. Mayo Robson, Leeds; Dr. Nuttall, Göttingen; Mr. Chowdhrory, Burdwan; Dr. Urquhart, Perth; Mr. J. R. White, Brentwood; Mr. J. Lowe, Southport; Dr. Malins, Birmingham; Dr. Holman, Reigate; Dr. W. Sharp, Rugby; Dr. Ransom, Nottingham; Mr. Harding, Ballincolling; Mr. Ewart, London; Mr. Knutz, Wiesbaden; Dr. Tomkins, Leicester; Mr. Maw, Bradford; Mr. Mayhew, Ipswich; Mr. Ryan, London; Miss Chreiman, London; Mr. Thwaites, Bristol; Medicus, Mon.; Damon; A. B., London; Quæstor; Coleman M.; Subscriber.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. White, Dorset; Mr. Hart, Glasgow; Mr. Eschwege, London; Messrs. Paige and Co., Redruth; Mr. Spencer, H.M.S. *Ajax*; Messrs. Butterfield and Son, Northampton; Mr. Davenport, London; Messrs. Macfarlan and Co., London; Dr. Hardcastle, Newcastle; Messrs. Wright and Co., Bristol; Dr. Pavy, London; Mr. Lane, London; Messrs. Gale and Co., London; Mr. Dunning, Shrewsbury; Messrs. Maclehose and Son, Glasgow; Mr. Trestrail, Aldershot; Messrs. Crossley and Co., London; Mr. Apperly, Hampstead; Messrs. Caldwell and Son, Dublin; Mr. Sympson, Lincoln; Dr. B. Taylor; Messrs. Robbins and Co., London; Messrs. Warren, Bristol; Dr. Gibbon, South Shields; Mr. Spanton, Hanley; Dr. Dixon; Mr. Armstrong, South Shields; Dr. R. Liveing, London; Mr. Mackay, Lancs; Mr. Sampson, York; Mr. Wormald, Manchester; Mr. Argo, Warrington; Mr. Royle, Guernsey; Mr. Hornibrook, London; Mr. Hicks, London; Mr. James, Haverfordwest; Mr. Heywood, Manchester; Mr. Nicholls, Hartest; Dr. Harrey, Derbyshire; Mr. Crowther, Staffs; Mr. Hale, Chesterfield; Mr. Roberts, London; Mr. Leggatt, Eastry; Mr. Elliott, Carlisle; Dr. Powell, London; Home, London; H. Office, Aberdeen; Verax, London; Vendace, Leeds; M.D., Huddersfield; University of Aberdeen; D. D., London; A. E., London; Dorset, London; Lady Superintendent, London; Royal Albert Hospital, Devonport; York County Hospital; Alpha, Leeds; Reversion, London; Deaconess Elsie, London; Holiday, London; Secretary, Cambs; Physician's Son, Middlesbro'; W. R., London; Alpha, Leicester; Bradford Infirmary; Jar, London; M. S., Southport; Graduate, London; M.P., Tottenham; Doctor, Birmingham; F. W. P., Herts; Surgeon, Coldfield; Fides, London; Medicus, York; James, London; Medicus, Wilts; Experience, London; W. B., London; M.D., Notts; Surgeon, Pontypridd; M.D., Yorks.

Midland Weekly Herald, Hull Daily Mail, Herald and Weekly Free Press, Liverpool Mercury, Reading Mercury, Hertfordshire Mercury, Windsor and Eton Express, Surrey Advertiser, Railway Supplies' Journal, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 31.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, August 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 3.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 4.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.